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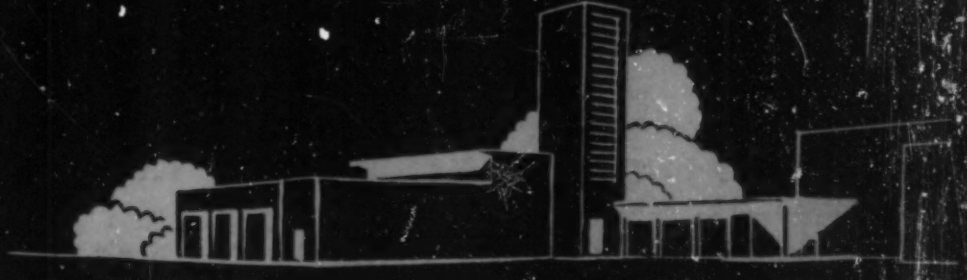

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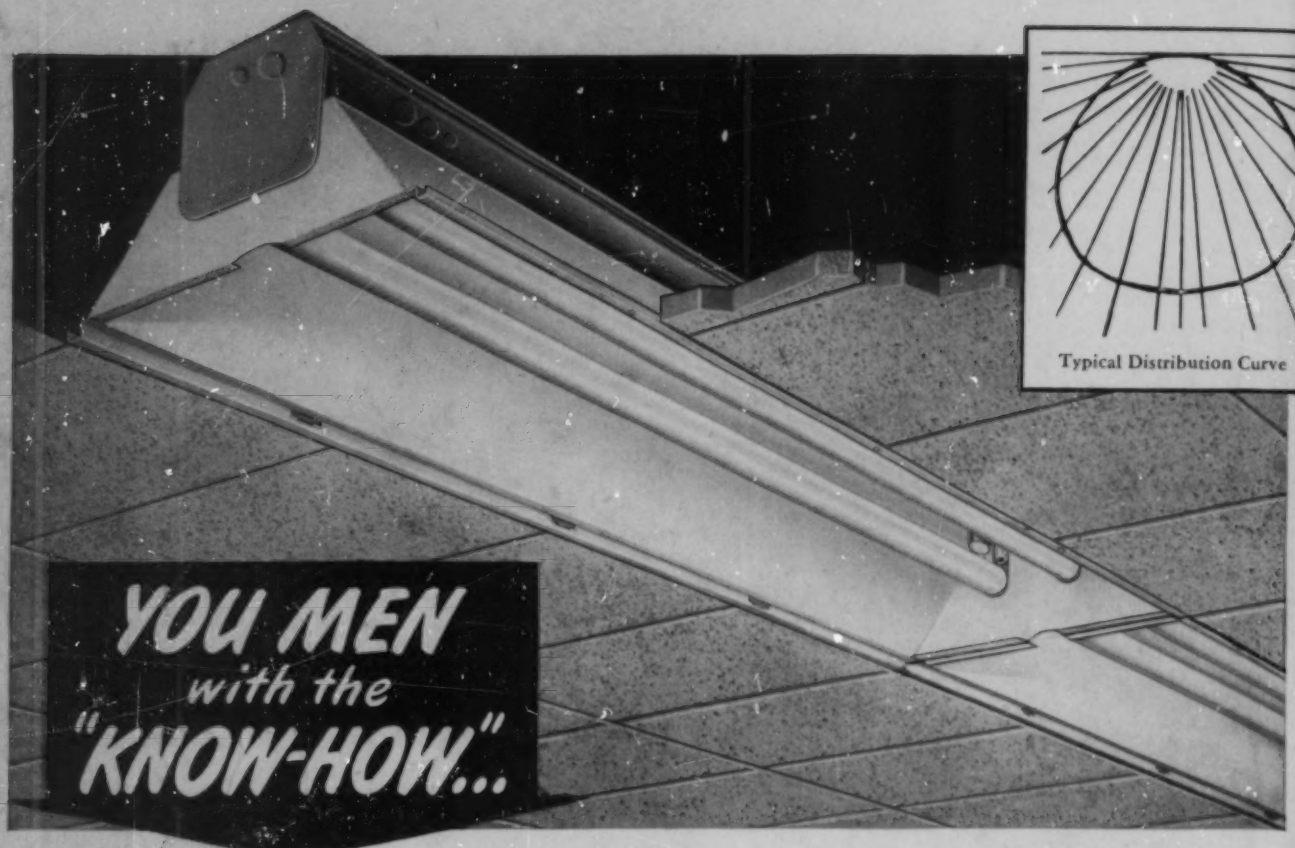

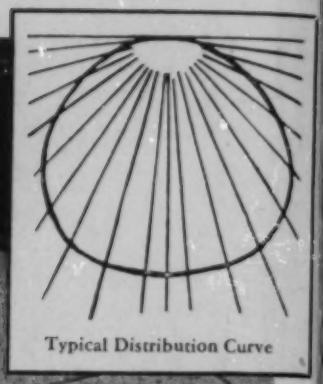
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Flesh
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ARCHITECTURAL RECORD

COMBINED WITH AMERICAN ARCHITECT AND ARCHITECTURE

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THE RECORD REPORTS

Future of the NHA • Housing Data Collected • Transition Programs and the WPB • Release of Materials • Playing to Markets • War Housing

THE SEASON is here when people eating lunch in the Congressional restaurants find seats. No longer are the Capitol's committee rooms filled with those who earn livings by organizing complaints against OPA, WPB, ODT and all the others. In place of lobbyists writing to Congressmen for hearings on something or other, Congressmen are writing the lobbyists whom they have already heard, for campaign contributions. Many of the Congressmen are going home. In this typical atmosphere of a campaign year summer, first serious legislative work on housing has just started.

Postwar Legislation

Senator George, who heads the Senate's Postwar Policy Committee, said recently that his group is trying to measure postwar housing needs and to frame legislation to stimulate building. A sub-committee, headed by Taft, is actually at work. It has a small technical staff which includes, as advisors, Miles Colean of Starrett Bros. & Eken, author of the recent Twentieth Century Fund book, "American Housing," and Ernest Fisher, economist of the American Bankers Association.

One quite specific point before the committee is the future of NHA which, like other agencies, is slated for dissolution when the war is over. The committee wants to know whether to retain intact or to modify NHA's constituent units. Among other things, it is interested in the power of national banks to buy mortgages.

Housing Data Collected

It is collecting material on the costs of home ownership: land, building, public improvements, utilities, maintenance, etc. It is looking into such combinations to peg building costs as Thurman Arnold used to write about. Statistical data, seeking to measure the relationship between building and general employment, between building costs and rentals, etc., are being assembled. NHA is now taking steps to find what part housing plays in the whole business picture; how much labor, money and materials will be available for home building, what proportions of family income will be invested in home ownership, etc. To date, most of the work has been by mail. Replies are just coming in.

There was a single executive hearing at which NHA Administrator Blandford testified. He sharply distinguished his own from other war agencies. NHA consists, after all, of a great many housing organizations which had operated independently before the war. Consolidation has worked sufficiently well to recommend itself permanently. Moreover, in contrast with other agencies whose jobs are peculiar to the war, NHA works in a field which is more active in peacetime than at present. It is felt that there is general agreement that the government continue each of its permanent activities in the industry —FHA, Federal Home Loan Bank Administration, slum clearance — so that the issue is one of consolidated vs. independent operation. Blandford argued for the present consolidation under NHA. He said that he rarely came upon proposals to dissolve NHA but that, on the other hand, suggestions were frequent for the general merger with NHA of practically all agencies remotely connected with construction. He did not think much of this further consolidation.

NHA Plans

Blandford told the committee that he is working continually with WPB to get housing started as war contracts taper off. He mentioned his "H2" program which was to substitute limited slum clearance for the war housing now coming to an end.

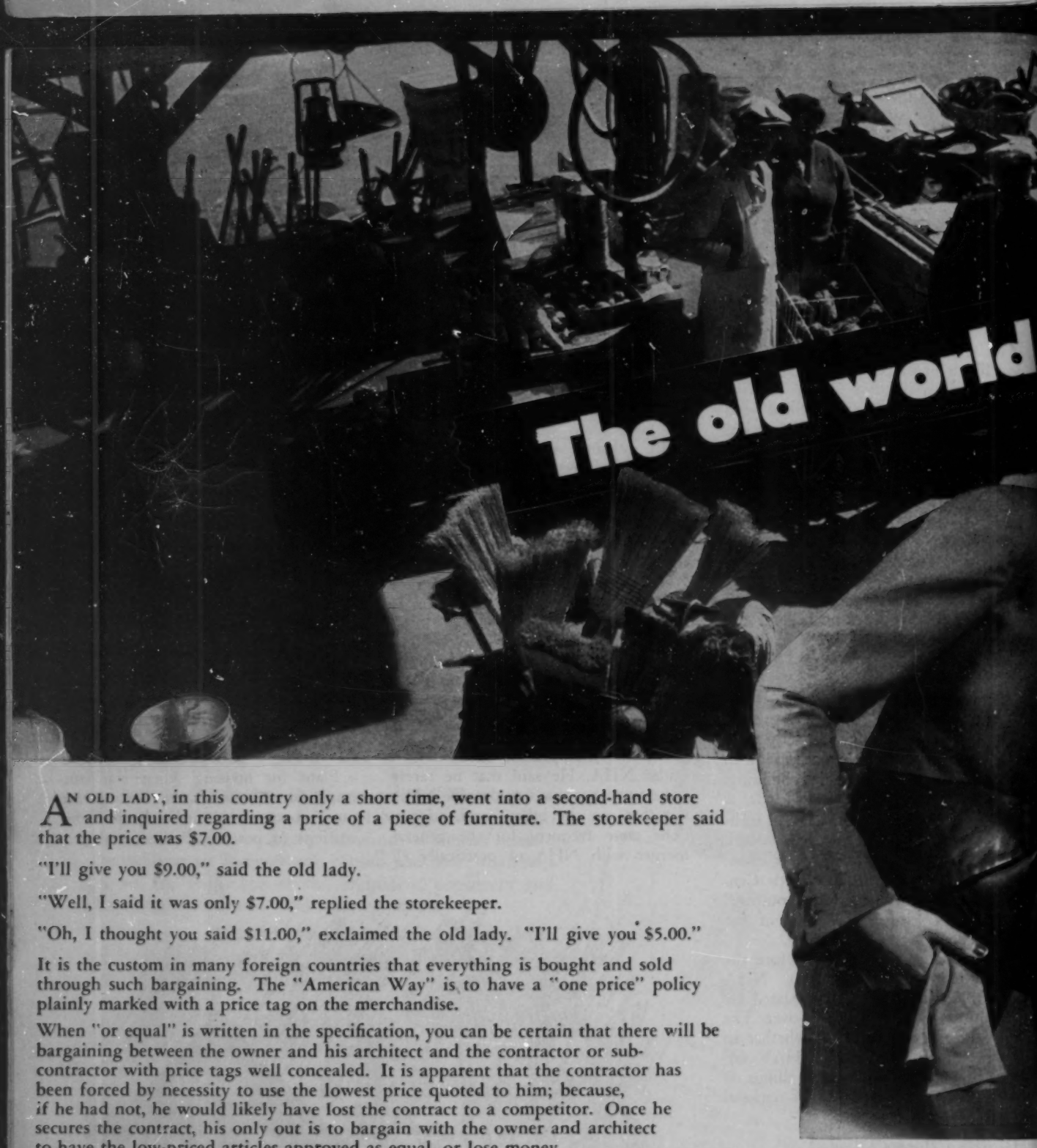
That program, it becomes evident now, is slower in getting started and, after a start has been made, may be less important, than Blandford had hoped. The program was worked out readily enough with WPB which, in fact, appeared to have wanted just some such thing. The interference was in the Budget Bureau. To insure new houses in crowded cities, FHA asked authority to insure $200,000,000 of additional houses. The Budget Bureau cut the figure to $100,000,000. Grant of this authority by Congress is behind schedule because the committees which deal with FHA have been listening to praise and blame of OPA since early spring.

Transition Programs and WPB

Plans for housing when war contracts cancellations start flowing are more important immediately than discussions of postwar. Transitional pro-

(Continued on page 10)

"The 'outdoor living' feature of postwar housing doesn't seem to interest them . . ."
—Drawn for the RECORD by Alan Dunn



AN OLD LADY, in this country only a short time, went into a second-hand store and inquired regarding a price of a piece of furniture. The storekeeper said that the price was $7.00.

"I'll give you $9.00," said the old lady.

"Well, I said it was only $7.00," replied the storekeeper.

"Oh, I thought you said $11.00," exclaimed the old lady. "I'll give you $5.00."

It is the custom in many foreign countries that everything is bought and sold through such bargaining. The "American Way" is to have a "one price" policy plainly marked with a price tag on the merchandise.

When "or equal" is written in the specification, you can be certain that there will be bargaining between the owner and his architect and the contractor or sub-contractor with price tags well concealed. It is apparent that the contractor has been forced by necessity to use the lowest price quoted to him; because, if he had not, he would likely have lost the contract to a competitor. Once he secures the contract, his only out is to bargain with the owner and architect to have the low-priced articles approved as equal, or lose money.
The owner and his architect must battle for the equipment they want used or lower the quality of their building. As his profit is at stake, the contractor will naturally put up the fight of his life to have an "or equal" substitute approved. Delays are the result and as a rule everybody loses.

The "base bid and alternate" specification is the "American Way." Price tags are out in the open and the owner and his architect can select the best value after proper consideration of quality, price, service and delivery. When this selection has been made, the contract can be signed with no bargaining. The owner receives the building he desires at a fair price.

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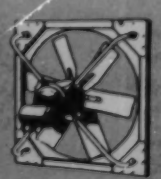

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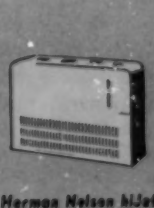

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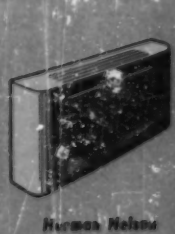


Herman Nelson Unit Ventilators

 (Continued from page 7)

grams may start any time, depending on what happens in Europe. It is in this transition that WPB is most interested. WPB's attitude is cagey and cautious, but for all that, long headed with a view to the all-over picture. While those in charge of L-41 release certain materials under certain conditions from time to time, they are quietly preparing for the day when the bars are to be more fully removed.

If L-41 were given up today, builders would be at a loss for practically all of the fixtures that go into a house. There are, no doubt, some dealers' stocks but these are scanty and hardly anything is in production. WPB officials are agitating for the early production of household equipment—stoves, plumbing fixtures, lighting equipment, etc. According to their estimates, it will take longer to restore many of these industries than to build a home. Congressional groups interested in building are doing what they can for early reconversion of the fixture industries.

Release of Materials

It seems likely that much of this manufacture will start in dribbles. WPB promises to release materials promptly to most plants losing war orders, but the largest companies are likely to remain longest in war work. As fixtures are turned out, the first ones probably will be used for repairs and remodeling. New building will come after production of fixtures is reasonably high and demand by present home owners has been satisfied. The method for then relaxing L-41 will favor small contractors. Several proposals are now before Nelson who, however, has said nothing as yet to suggest that he has looked at them.

Meanwhile, WPB is dealing with some minor material easing. For instance, the masonry interests suggested that brick refacing of frame houses could cut down on need for fuel. Ickes is reported to have liked the idea and to have had somebody go to bat for it at WPB. An order is coming out now allowing home owners to get such bricking jobs done. However, such a job might cost about $1,000 and endless fussing to face a $5,000 house and some think that few will bother. But bricks, cement and the right kind of skilled labor are all available so that, they point out, there is little reason for continued restraint.

Playing to Markets

There are ample signs of keen struggle among materials producers for the housing market, once housing is under way. Representatives of the big glass companies, for instance, tell of a great many plans for after the war building promotion. They are interested primarily in factories, office buildings, high class residences, and such buildings as need maximum continuous good lighting. Because initial prices will be high, their campaigns will stress low maintenance because of slow physical depreciation and low heating and lighting bills. Manufacturers also have their plans for cutting building costs by correlating sizes and shapes with building layouts on a standardized module.

Entrance of such companies as U. S. Steel into prefabricated housing makes the struggle fiercer. The prefabricators, who got a big boost in war housing, hope to change the structure of the whole industry. For instance, materials, fixtures, piping, etc., are generally bought in open market from dealers. Some prefabricators intend to place orders directly on manufacturers. Elimination of distributors' mark-ups, they say, will be a major method of reducing costs. They think in terms of relatively novel materials and such things as plywood, plastics, sheet steel and aluminum.

Lumber Outlook

The lumber industry is so absorbed in immediate scarcity that they talk less about postwar competition. They are hopeful of improved supply after victory in Europe, but realize that supply will get worse and worse while there is fighting on the continent. Immeditely, control over lumber is being tightened. Effective August 1—unless something slips up—WPB's lumber order will be revised once more, bringing everybody in the industry under direct control. The order will stipulate, for example, which types of consumer will be allowed to buy from which classes of dealer, etc. It will be enforceable at both the buying end and the selling. An obvious source of trouble is that an order directed to so many people may be confusing. At least, WPB officials believe that the order will not spawn a multitude of new forms and questionanaires; old ones can be used.

War Housing

Full and detailed statistics showing experience with war housing have been worked up by NHA and are likely to become available. They were presented twice in Congress, once before Taft's postwar sub-committee and once before the Appropriations Committee as it was asked to make up a small deficiency in the agency's present balance. The agency asked for $15,000,000 and the House Committee offered $7,500,000, which is the sum likely to be appropriated. In presenting its case, NHA stated that at first large housing developments near major plants were required but that now only small numbers of units in scattered areas are wanted. It is like filling in odd sizes in a clothing store after a generally adequate inventory has been stocked.

Although the main part of the work has been done, NHA expects more trouble. Recently, for instance, the Army stepped up artillery production. Demountable houses, made for artillery workers and then removed when the Army's artillery program was slashed a few months ago, may have to be restored to the sites originally planned. The Brewster shutdown provides another example of how hard it is to keep abreast of changing needs of the Services. A good while ago Naval officers stated that workers were to be transferred from Brewster's component plant in Long Island City to the Johnsville, Pa., assembling plant. After a good deal of negotiation, it was decided to build 1,200 publicly financed units. The Navy insisted also upon some more attractive houses for executives who were to come in from Long Island City. After the homes were built, the Brewster contract was canceled.

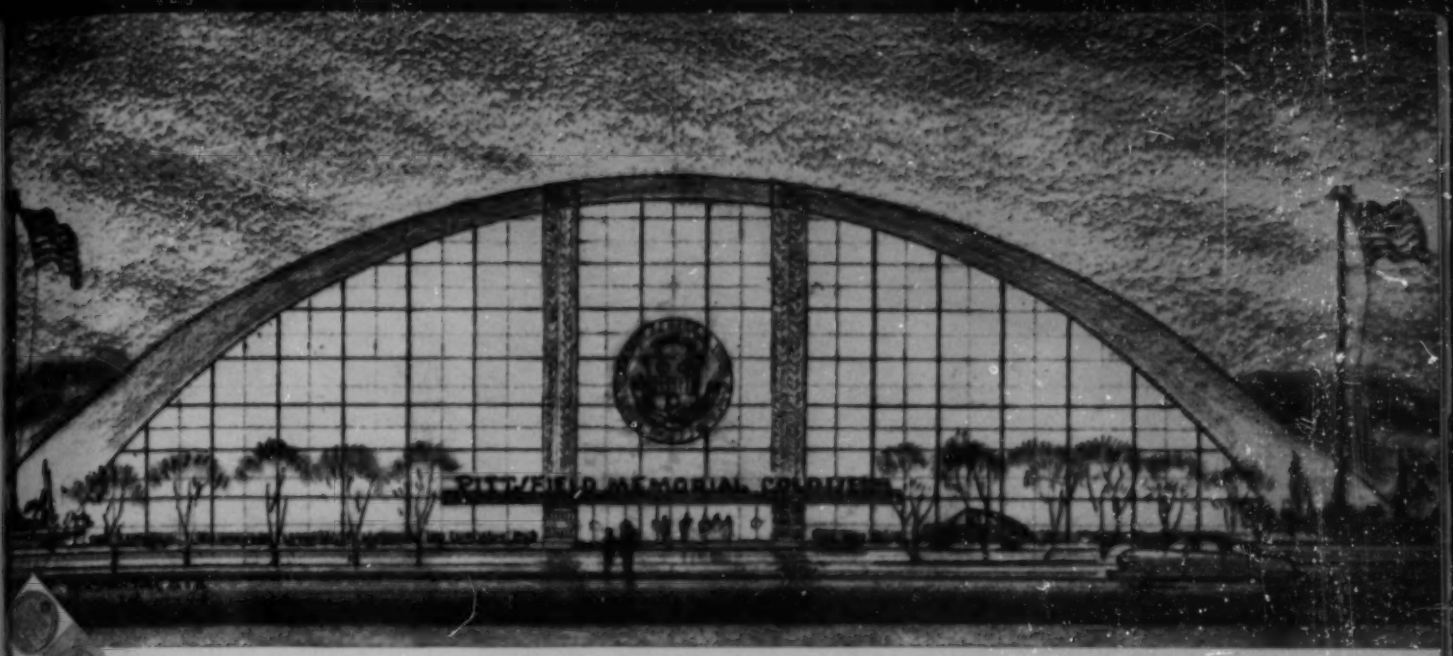
From July 1, 1940 through March 31, 1944, 3,828,047 units in all were used by war workers. Among them were 2,188,667 family units. Of total units in use, 1,996,000 had been built before the war. Of the remaining 1,832,047, some 1,030,412 were privately financed.

Slum Clearance

The battle in Congress between local contractors and advocates of publicly financed slum clearance and housing goes on. All of those who testified before the Senate committee are now repeating their testimony before the House. Some private builders are shifting their ground a bit; instead of basing their argument primarily on cost comparisons, they are charging that publicly financed building is a road to socialism.

In Congress, those interested in construction at all give a good deal of attention to local postwar plans. Among all the mayors, county officials, and party bosses who come to Washington, it is said, La Guardia of New York has come up with the most complete plans for postwar construction. A great many of the others are waiting to find out how much, if anything, the federal government will contribute to

(Continued on page 12)



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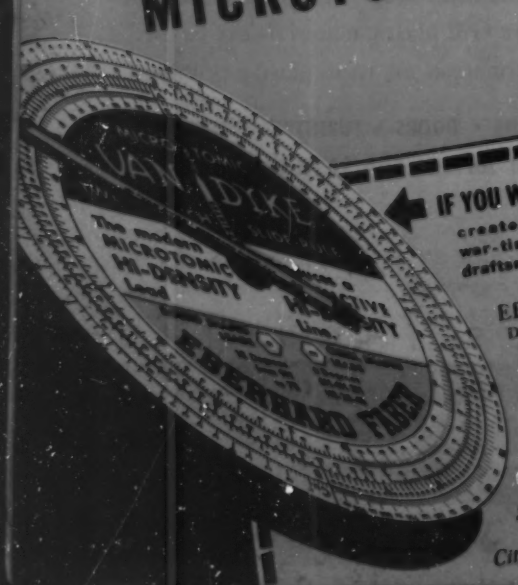

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THE RECORD REPORTS

(Continued from page 10)

planning expense, and whether or not they can expect "handouts" for actual construction. There seems to be little proof at present that such handouts from the federal treasury will be necessary—no matter how "nice."

◆ ◆ ◆

NHA NOTES

No Normal Construction Yet

A report that the WPB soon will issue priorities and release building materials for a partial resumption of normal private housing construction has been denied by WPB and NHA. No decision has been made, according to a statement by the two agencies, and construction is still limited to the war housing program in the same measure it has been in the past.

The statement on relaxation of materials for building construction was attributed to L. H. Keyserling, general counsel of NHA, who recently appeared before the House Public Buildings and Grounds Committee and obtained an approval of an amendment to permit the use of Lanham Act funds in processing applications made for housing other than for occupancy by war workers. This amendment merely permits the use of these funds for processing priority applications of individual "hardship" cases, the administration of which was recently transferred from WPB to NHA, as well as applications under a program to relieve general hardship and congestion in certain areas when and as materials for this program become available.

Mr. Keyserling did not make any statement as to the time when normal house construction will be resumed, or to its extent, decisions for which rest entirely with the WPB, the agencies said.

Removal of Temporary Structures

Plans for the removal of two temporary war housing structures containing 12 family units from Wilmington, Del., to Front Royal, Va., to determine the practicability of re-using such housing has been announced by the Federal Public Housing Authority.

Movement of war housing by FPHA has been limited thus far to those of prefabricated demountable construction. To date, approximately 4,000 demountables have been scheduled for removal to new locations under its program to re-use publicly-financed war housing wherever possible.

One of the Wilmington structures to

(Continued on page 14)

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SURE, EVERYBODY is carrying a bigger load these days. It can't be helped. But it seems twice as heavy when nerves get frayed, and tempers short, from the unceasing din of the noise demons. That's why it will pay you to show your clients how to put an end to these nerve-janglers—once and for all—with efficient, economical ceilings of Armstrong's Cushiontone.

Cushiontone absorbs up to 75% of all noise that strikes the ceiling, thanks to the thousands of tiny 12″ x 12″ sound-absorbing holes. Its painting improves the appearance of Cushiontone ceilings.

New Free Booklet gives the facts. Send for your copy, and the name of your nearest Cushiontone contractor. Armstrong Cork Company, 2407 Stevens Ave., Lancaster, Pa.

ARMSTRONG'S CUSHIONTONE

Made by the makers of Armstrong's Linoleum

THE RECORD REPORTS

(Continued from page 12)

be moved is one-story, containing four family units; the other is two-story with eight family units.

The structures will be cut into panels of approximately 8 by 10 ft. in size and removed overland in trucks. When re-erected at Front Royal, the houses will be assembled as demountables. The contract for moving and re-erection of the units will call for completion within 30 days.

Portable Shelter Units

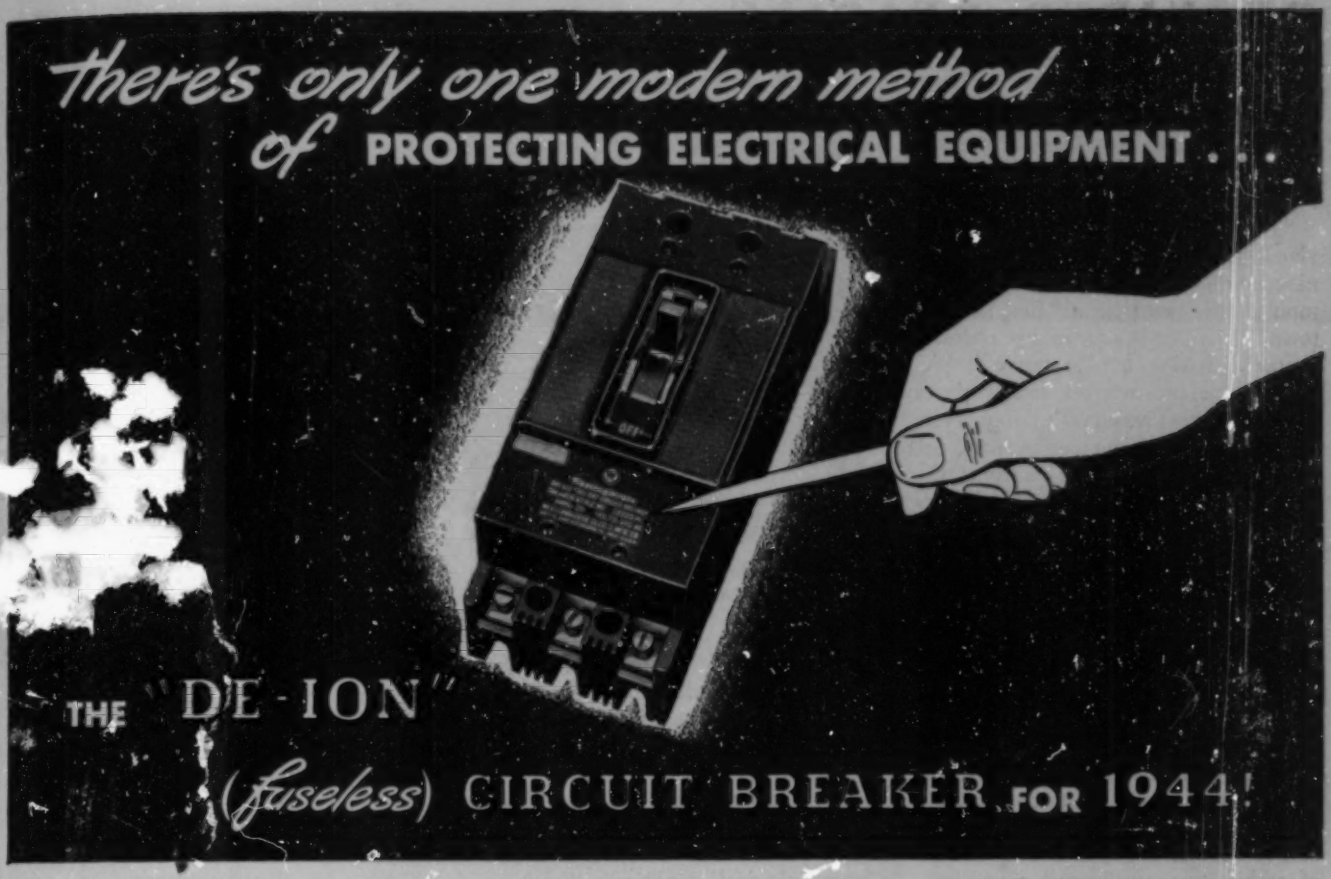
Meanwhile, in a further effort to meet the fluctuating war housing needs within the limits of the rapidly diminishing funds for the purpose, a unit has been designed which can be put in use and readily transported when the new unit is no longer needed. The revised version of the previous experimental portable unit. It differs from the early model principally in the simplification of construction details.

The central portion of the unit, consisting of a combined living, dining and kitchen space 12½ ft. sq., has a number of built-in features including studio couch, refrigerator, stove and kitchen sink, clothes hamper and A bed room may of the central un one or two bed

Th neither bathr er, but both can be necessary or warra

For portable shelter ned a community nt activity, m pace, wi

there's only one modern method of PROTECTING ELECTRICAL EQUIPMENT . . .



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THIS BREAKER IS THE REAL BARGAIN AMONG PROTECTIVE DEVICES, IN THAT IT GIVES YOU "MORE FOR LESS".

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More output per machine . . . does not interrupt production on harmless momentary overloads; thus preventing many needless stoppages or delays.

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4. More productive machine-hours . . . assures faster resumption of interrupted service after causes of overloads or short circuits are removed. There is nothing to replace or repair—to restore service, simply throw the handle. This feature alone saves American industry more than one million man-hours yearly.

5. Less cost . . . the lifetime cost of the "De-ion" (fuseless) Circuit Breaker of 1944 is less than that of any other protective device. Ask your Westinghouse representative for facts and figures. Westinghouse Electric & Manufacturing Co., Dept. 7-N, East Pittsburgh, Pa.

"DE-ION" (*fuseless*) CIRCUIT BREAKERS

Westinghouse

REV

By Ernest
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201 pp.,

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Mr. Mendelsohn's caliber, words of
wisdom are scattered liberally throu
the three papers. To wit: "After a
century of futile experiments to re
construct the past . . . we again see
architecture transcending into an essen-
tial piece of art, a pure act of creation."
"Because architecture is based on or-
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of nature as well as the products of
man, it has become again intelligible
—even to the illiterate." "Public opin-
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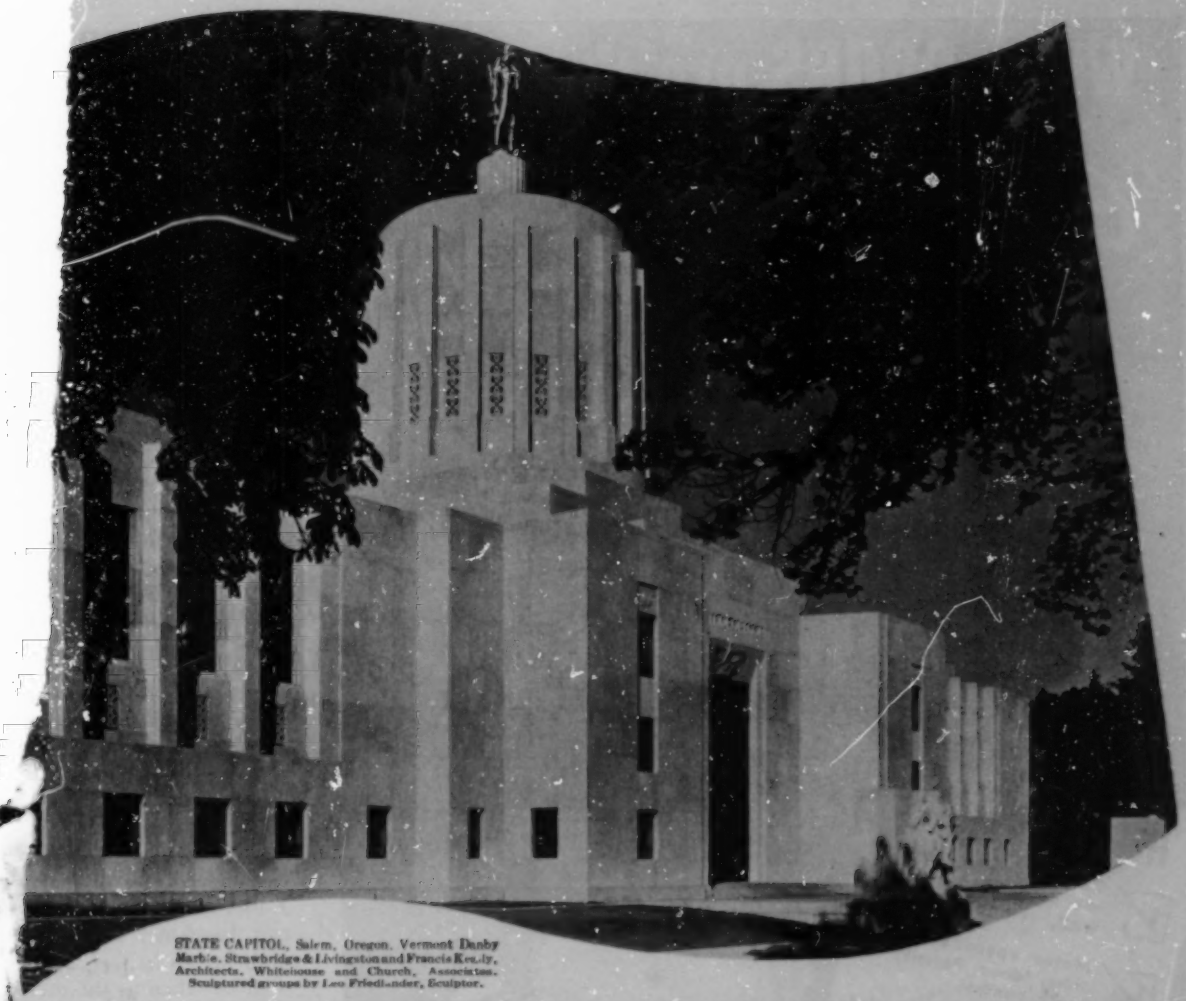

STATE CAPITOL, Salem, Oregon. Vermont Danby Marble. Strawbridge & Livingston and Francis Keally, Architects. Whitehouse and Church, Associates. Sculptured groups by Leo Friedlander, Sculptor.

Ideal Material for the Municipal Building of TOMORROW!

EDMOND TOWN HALL, Newtown, Conn.
Philip Nichols Sunderland, Architect

During the war—and after—even though largely converted to war work, the Vermont Marble Company has extensive reserves of marble for interior and exterior uses . . . available where conditions permit.

Vermont Marble, because of its durable, workable formation and inherent beauty, lends itself to all types of architecture. Because of this, it has been chosen for many outstanding federal, state and municipal buildings such as the Supreme Court Building, Oregon State Capitol, Edmond Town Hall (Newtown, Conn.) and many others.

Vermont Marble is available in a wide variety of colors and finishes for every functional and decorative need. It has great compressive strength . . . it comes in unlimited sizes for all practical purposes. The public buildings shown here suggest two types of construction to which Vermont Marble lends itself so successfully.

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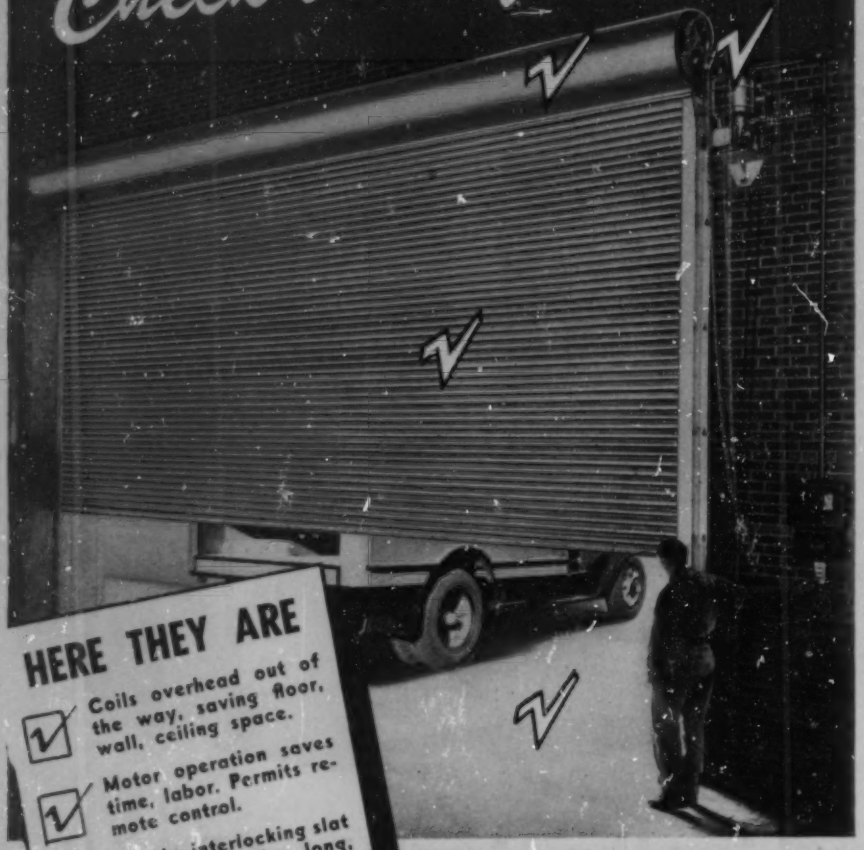
Check these features



HERE THEY ARE

- Coils overhead out of the way, saving floor, wall, ceiling space.
- Motor operation saves time, labor. Permits remote control.
- Sturdy, interlocking slat construction for long, dependable service.
- Opens straight up. Ice, snow, stored materials don't hinder operation.
- Its simplicity of design harmonizes with any architectural style.

You're sure to want these KINNEAR ADVANTAGES

Check these advantages of Kinnear Rolling Doors and you'll find that no other door offers so many outstanding features. Kinnear's sturdy, interlocking steel-slat construction is resistant to intrusion, fire, damage, wear, and weather. The Kinnear Rolling Door coils neatly overhead out of the way of damage, saving floor, wall and ceiling space — it opens straight up, over snow, ice, and stored materials — neat in appearance, it harmonizes with any architectural style. With Kinnear Rolling Doors and Motor Operation — a matchless combination — you simply press a button and the door rises smoothly and easily into a compact coil above the opening. Kinnear Motor Operation also means savings in time and labor, in heating and air-conditioning costs. If you're not already profiting from these advantages, write immediately for full details on Kinnear Rolling Doors and Motor Operation. The Kinnear Manufacturing Company, 1860-80 Fields Avenue, Columbus 16, Ohio.

Offices and Agents in All Principal Cities

SAVING WAYS IN DOORWAYS

KINNEAR ROLLING DOORS

REQUIRED READING

(Continued from page 26)

the country's architecture quickly turned to "a fanatical urge for functionalism and again the interior followed the new lead."

PROCEEDINGS OF THE NATIONAL CONFERENCE ON POSTWAR HOUSING

Chicago, March 8-10, 1944. New York 18 (512 Fifth Ave.), Natl. Com. on Housing, Inc., 1944. 5¾ by 8¾ in. 229 pp.

The proceedings of the by now much discussed national housing conference (ARCHITECTURAL RECORD, April, 1944, p. 93) are here presented in book form. All addresses and discussions are included. The total effect is one of idealism and optimism, with a generous spattering, however, of differences of opinion that may lead to deadlocks once the deck is cleared for action.

What these pages actually give is a composite picture of current opinion on housing. Perhaps the most encouraging part of it is the general acceptance of the need for immediate planning and the desire to remedy the housing wrongs of the past. Henry J. Kaiser's dynamic closing phrase, "It can be done!" — which brought the audience to its feet, applauding—could well be taken as the theme of the conference.

The National Committee on Housing has now appointed a Committee on Recommendations to study the conference proceedings and form conclusions drawn from the exchange of ideas at the meeting. Their findings should be interesting.

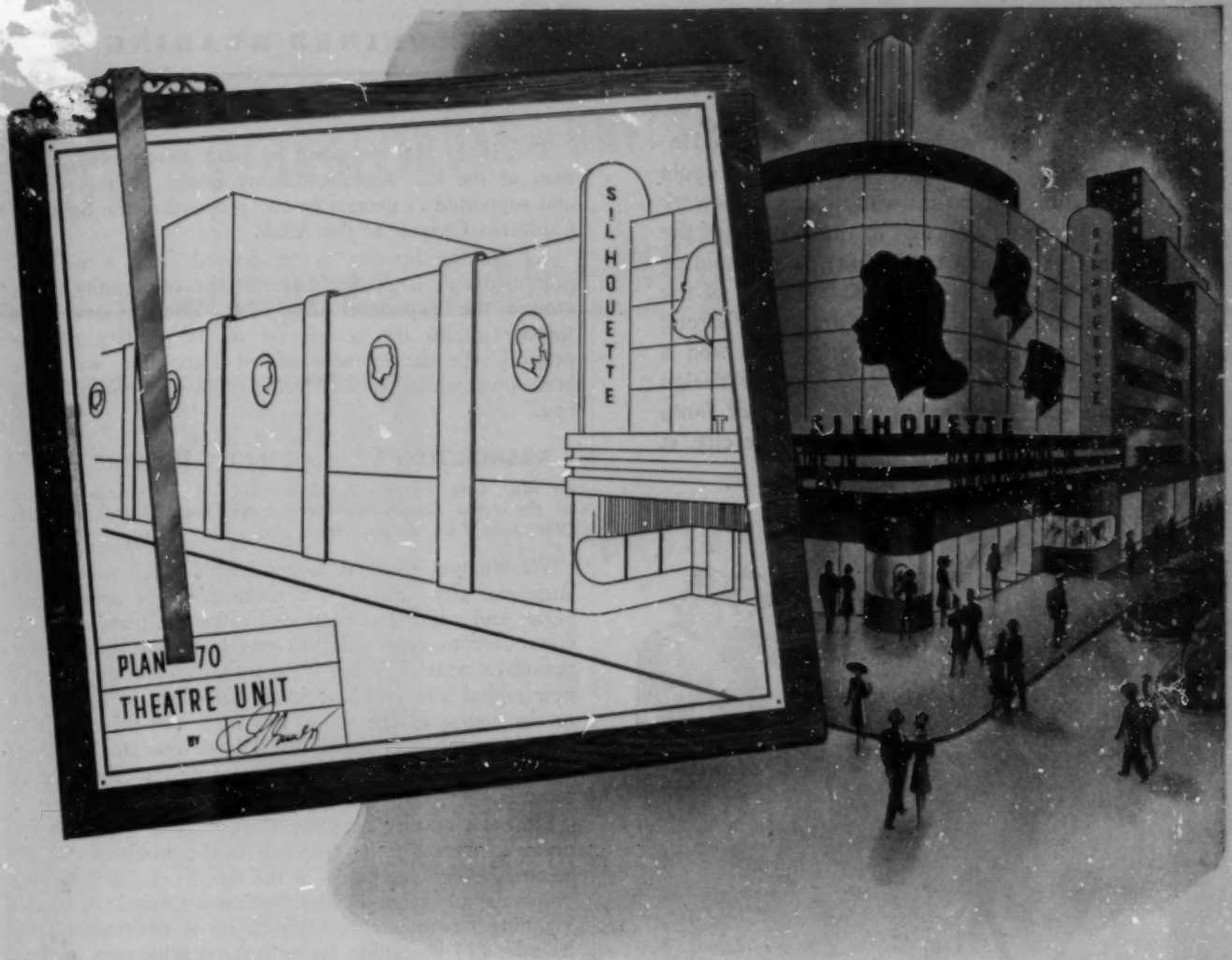
CITY PLANNING

COMMUNITY DEVELOPMENT

Through an Exposition for Los Angeles. By Samuel E. Lunden, A.I.A. Los Angeles, The Haynes Foundation, 1944. 8½ by 11 in. 43 pp. illus.

As the title indicates, this study presents the idea of a postwar exposition or world's fair to stimulate postwar planning in the Los Angeles area. Several proposals are outlined in the main body of the text, and given in full in the appendix. Of these the most interesting is the so-called "dispersed" type of exposition, which would separate the fair into units—recreation and amusement, sports, cultural, model community, agricultural and livestock, etc. The various units would be located in and around the city in such a way that each could become a permanent part of its community.

(Continued on page 30)



Tomorrow's "Box-Office" Appeal

is on Architects' Drawing Boards Today

Theatre management knows that "box-office" appeal depends almost as much on the theatre-goer's comfort as upon the film itself. They know, too, that postwar theatres without air conditioning will be as unpopular as silent films —and patronized as little.

That's why the new and modernized postwar theatres their architects are planning naturally include Modern Air Conditioning. Undoubtedly you recognize its importance to the postwar theatres, stores, restaurants, offices . . . which are on your drawing boards.

Modern Air Conditioning means Westinghouse—and its years of pioneering research and engineering experience.

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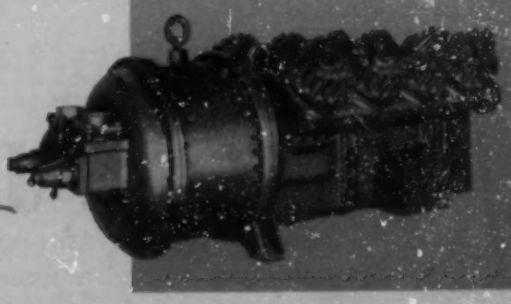

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"Top of the Evening" Mon. Wed. Fri. 10:15 E. W. T., Blue Net.

The man is mad!

Brunelleschi, the Florentine architect, was called insane when he declared, "I propose to raise a cupola without a center column and without any framework whatever. It must be turned in the manner of the pointed arch and must be double . . . the building must be strengthened by the dove-tailing of the stones . . . the walls must be girt around by strong beams of oak." Brunelleschi's daring plan won a few followers. The architect died, but his design was carried out and the exquisite dome of Santa Maria del Fiore rose majestically over the city. It is Brunelleschi's most famous work.

Drawing pencils are tools which transform daring ideas into tangible designs. Typhonite Eldorado pencils are master tools. Whatever the point—needle or chisel—Typhonite Eldorado is the easy, pleasant-to-use pencil that makes the line or figure crisp, sharp, firm, clean. Result? The job is better and the day made brighter for all hands.

Write for Your Complimentary Copy

***"I Shall Arise"**—a portfolio of Typhonite Eldorado pencil reproductions by Samuel Chamberlain. Subjects are buildings of art and historical importance bombed by the Luftwaffe.*

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ELDORADO

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JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY 3, N. J.

REQUIRED READING

(Continued from page 28)

This is the plan proposed by John Anson Ford, chairman of the Los Angeles County Board of Supervisors, and supported in general by the proposal of the Southern California Chapter of the A.I.A.

As for the benefits to be derived from a well-programmed and large-scale fair: "If the community rallies around the Exposition idea," Mr. Lunden says, "and thereby attains the completion of its primary postwar projects, the development of an Exposition will have been worthwhile. It will have served as a means to an end."

WASHINGTON: A PLANNED CITY IN EVOLUTION

By Maj. Gen. Ulysses S. Grant, 3rd. Address at a meeting of the Joint Committee on the National Capital, Feb. 18, 1944. 6 by 9 in. 20 pp. illus.

Washington, General Grant points out, is our only American city "which was planned before construction began and which has continued to have a plan, although from time to time the plan has been lost sight of for periods of years." What L'Enfant's plan for the nation's new capital was, and how it has been held to and varied in the course of the years, fills some two-thirds of this pamphlet. The remaining third is devoted to Washington's current problems, greatly magnified as they are by the war.

No book on city planning these days is worth its ink unless it offers definite proposals to the problems that are besetting every community in the country. General Grant's proposals are those of the National Capital Park and Planning Commission, of which he is chairman. They include: (1) legislation for urban redevelopment of slum and blighted areas, "providing for all possible construction by private enterprise and public housing for the lowest income groups"; (2) removal of federal laboratories, semi-industrial establishments (except the Government Printing Office and Bureau of Engraving and Printing) to suburban locations; (3) prompt demolition of temporary war buildings; (4) street development "in accordance with a well thought out thoroughfare plan."

THE MODERN CITY

By Ladislas Segoe. Address before the Buffalo City Planning Assn., March 13, 1944. Buffalo (158 Pearl St.), Buffalo City Planning Assn., 1944. 5½ by 8½ in. 20 pp. illus.

One of the chief difficulties in urban redevelopment, Mr. Segoe says, is of a financial nature, and governmental assistance in some form will be necessary. "No one has as yet a workable answer to the problem. Some of the best informed students believe that the solution will probably be found through a combination of long-term, low interest rate loans by the federal and state governments, contribution by the city in making the street and utility changes involved and providing neighborhood recreation and other community facilities, lower construction costs, and more liberal building codes, more stringent requirements concerning the demolition of buildings unfit for human use, and the like."

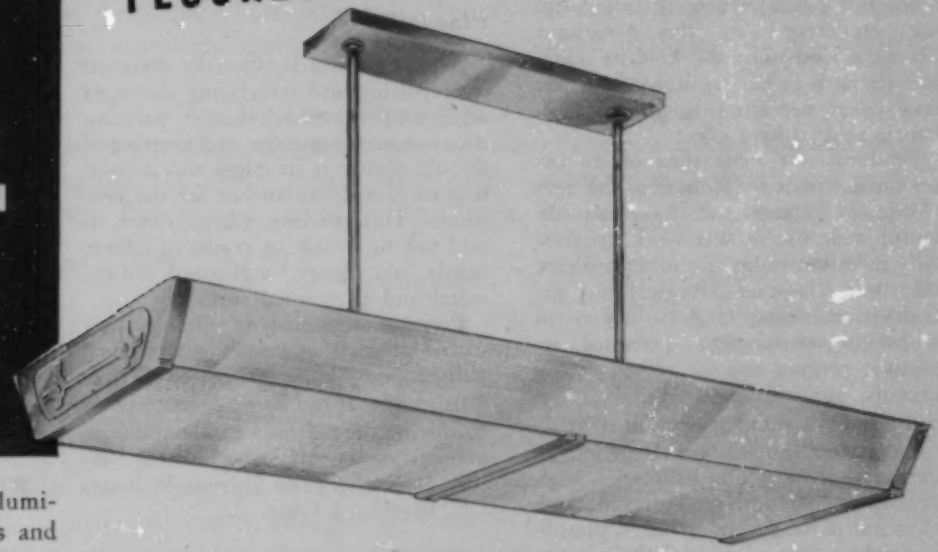
Speaking specifically of Buffalo, Mr. Segoe comments on the traffic problems, reorganization of railroad facilities, zoning, the proposed new lakefront development, parks and playgrounds, schools, etc. Like all other good planning consultants, he sees the city as a whole, and recognizes that planning must embrace not only the metropolitan area itself, but the outlying districts as well, and

(Continued on page 124)

USED AS INDIVIDUAL UNITS . . . USED AS CONTINUOUS STRIP INSTALLATIONS . . . . . CEILING OR SUSPENSION MOUNTED USING OR FLUORESCENT LAMPS PER UNIT.

WESTINGHOUSE COMMERCIAL FLUORESCENT LUMINAIRES

PROVIDE THE LEVEL OF ILLUMINATION YOU NEED



Getting the correct level of illumination for good seeing in offices and drafting rooms is often a problem . . . especially when a variety of tasks are performed in one general section.

To simplify your ordering and installation Westinghouse now offers a complete new line of Commercial Fluorescent Luminaires to provide high level, glareless lighting over a wide range of intensities. Four attractive models, designed for either individual or continuous strip application . . . for suspension or ceiling mounting are available.

Ask your Westinghouse lighting distributor for full details or write for bulletin B-3332. Westinghouse Electric & Manufacturing Co., Dept. 7-N, East Pittsburgh, Pa. J-04001

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PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

Lighting Equipment

FOR BETTER BUILDING

Cerex comb, left, unharmed by boiling

PLASTICS

Heat-Resistant Thermoplastic

The readily fabricated thermoplastics have heretofore had one important shortcoming — poor dimensional stability, characterized by low resistance to heat. But *Cerex*, a new thermoplastic just announced by the Monsanto Chemical Company, can hold its shape and strength in boiling water, and has even been subjected to boiling sulphuric acid without effect.

Produced for some time on an experimental basis by Monsanto, the new plastic is reported to have already found wide use in war work, particularly in radar, radio and other military electronic equipment, surgical and aircraft instruments, etc. Its ability to withstand sterilization promises its postwar civilian use for dishes, eating utensils, surgical and hospital equipment and any number of other items.

Additional applications suggested by its electrical insulating properties, high rigidity and strength are light reflectors, electrical parts, sprinkler heads, plumbing parts, pipe and pipe fittings, refrigerators, stoves and drying ovens, and others.

Entire production at present is going to war uses. Monsanto Chemical Co., St. Louis 4, Mo.

Plastic Moisture-Proofing

Because it requires no liquid solvent that would evaporate during the heating process and cause cracks through which moisture could seep, *Fosterite*, a new plastic developed by the Westinghouse Research Laboratories, is being used successfully to seal radar and radio parts against the moisture of the tropics. It is applied in a special-coating form which leaves no air gaps, and as it is "almost as fluid as water," Dr. C. F. Hill, manager of the Laboratories' Insulation Department declares, "it fills completely every tiny space in electrical windings and coils."

The plastic was named for Newton C. Foster, Westinghouse chemist who developed it.

Plastic Slip-Proofing

Developed originally to help make footing safer on shipboard, a new non-slip plastic covering called *Saf-T-Dek* is now available for civilian use. It comes ready for use and is applied with a trowel to a thickness of about 1/32-in. Sticks to practically any surface wood, steel, concrete or glass. On drying it imparts a skid-proof walking or working area, claimed to remain non-slip even when wet or oil-covered. Available in two standard colors, Tile Red and Concrete Gray. It may also be had in a spark-proof type where non-sparking floors are necessary. Truscon Laboratories, Caniff & G.T.R.R., Detroit 11, Mich.

Plastic Patch

A plastic material especially designed for repairing and resurfacing damaged walls and woodwork before painting does not necessitate the undercutting of the old plaster at its edges and its wetting to provide an anchor for the new patch. This product, *Plastic Patch*, is said not to shrink or crack, to adhere firmly to plaster, wallboard, brick, metal and all painted surfaces.

Preparation consists of adding water to the prepared material; it is applied with a putty knife, trowel or flexible broad knife. It can be made waterproof by mixing the patching compound with a small amount of water-resisting varnish or enamel. The Sherwin-Williams Co., Cleveland, Ohio.

ARMCO hangar being built at Washington National Airport as ATC headquarters

PORTABLE HANGAR

Simplicity of erection and saving of critical materials are among the advantages claimed for a new portable steel hangar building designed and manufactured by The American Rolling Mill Co., Middletown, Ohio.

Two sizes of hangar have been built to date, one with an inside width at the base of 152 ft. and a height of 36 ft. 7 in.; the other with a width of 192 ft. and a height of 48 ft. The length may be any multiple of 17½ ft.

The arches assembled at ground level are made up of pressed metal units bolted together into segments that are identical and interchangeable. These circular arch rings weigh a maximum of three and seven tons and are hinged to a corrugated base plate. Space between the arches is covered with standard Steelox panels, which span from arch to arch, serving both as purlins and roofing. They are bolted to the top chord of the arches. The ends of the hangar, including the doors, are also built of Steelox panels. A new type of multiple door section supported on a single rail at the bottom is a feature.

Glass-air sandwich for window insulation

WINDOW INSULATION

The question of how to take advantage of the storm-sash principle above the first floor of large apartment buildings of the postwar building era was given one answer at a recent meeting at the Architectural League, New York City, when the availability of *Thermopane* was announced and its qualities were demonstrated.

Thermopane consists of two panes of glass sandwiching a dehydrated air space hermetically sealed in by a special metal-to-glass bond. Because it is permanently installed it can be placed where today heights make it inconvenient to take advantage of the double-glass insulation principle of storm sash above the first floor.

Insulating properties of the unit are such that heat losses in the buildings

(Continued on page 110)

Triumphant War Memorials

◆ While the war is far from over and the country is warned of over-optimism, the recent successes of the Allies have brought up in many minds the subject of war memorials. War memorials there will be, as there always have been. But what will the World War II memorials be?

◆ There are at least two schools of thought on this subject, two basically different concepts of what constitutes the most-to-be-desired memorial. One idea is hallowed (or damned) by tradition. It has the virtue of singleness of purpose, however well or ill that purpose is fulfilled in the actual design and execution. According to this first concept the one function of the memorial is to commemorate the event, to perpetuate thoughts of the glory or victory, recording for all time the places, dates, and names involved. Frequently the attempt is also made to express as well the spirit, the courage, or the guiding principle of the fighting man.

◆ The triumphal arch or the towering shaft with its accessories were perhaps the apogees of this expression. The statue, the sculptured group, the flagpole, the classic temple, are familiar expressions of the "monumental" approach. Ponderous captured battle-relics also remind us of the grimness of war.

◆ The alternate concept of the memorial is that it should serve some useful social purpose, should preferably be a building designed to further a cause for which men gave their lives—Freedom, Justice, Brotherhood. Buildings devoted to education, health, government, the peaceful arts, the social sciences, research—all or any of these, and others, would seem to be fitting memorials, would serve to bring about the conditions for which men fought and died. These would also commemorate, and in a more active way. Prominent in the building itself, or on its facade, can be recorded the historical facts, and here too can be expressed graphically (or in permanent inscription) the ideal, the cause, the philosophy or way of life—for the inspiration of posterity.

◆ The choice must be made, and soon, but it should be the choice of the people. Which shall it be—the monument or the commemorative building serving a useful purpose? As architects, as engineers, and as citizens, we can influence the choice—as well as the final design. And the choice, to be wisely made, must consider both the community needs and its desires. It is another opportunity for professional leadership, for a distinct service to society, for the well-being of the community.

Kenneth K. Stowell

EDITOR

MERCANTILE NATIONAL BANK

BUILDING, DALLAS, TEXAS

WALTER W. AHLSCHLAGER, ARCHITECT

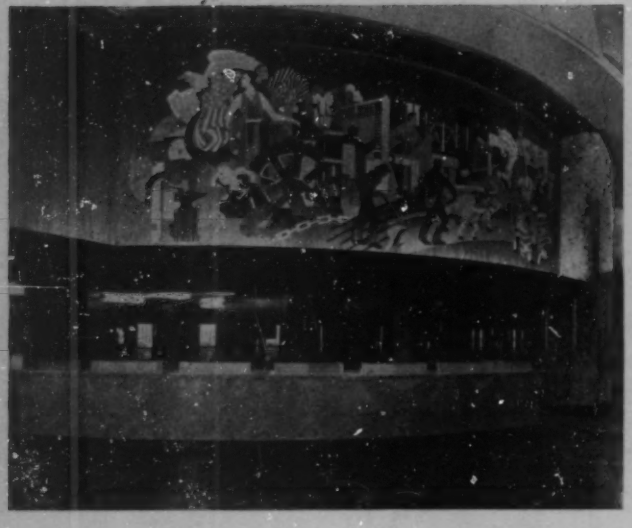
JUST TO PROVE that reports of its death have been exaggerated, the skyscraper office building makes another appearance, all the more surprising in this case because of difficulties under which it was completed. The Mercantile National Bank Building is typical of many of its forebears in that it was erected to house an institution which seemed always to be needing larger quarters; also, of course, to provide office space for the expanding industry of the Southwest. Begun early in 1941 and completed late last year, its office space was fully occupied immediately, much of it being grabbed up by wartime government offices.

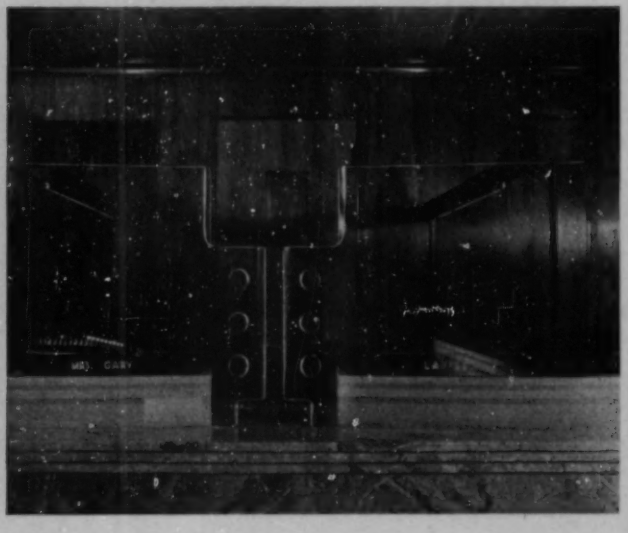
William Langley photos

Cost of the building, including bank interior and equipment, and complete air conditioning, was $3,800,000. It has a gross cube of 5,500,000 ft., with 255,000 sq. ft. of net rentable office area above

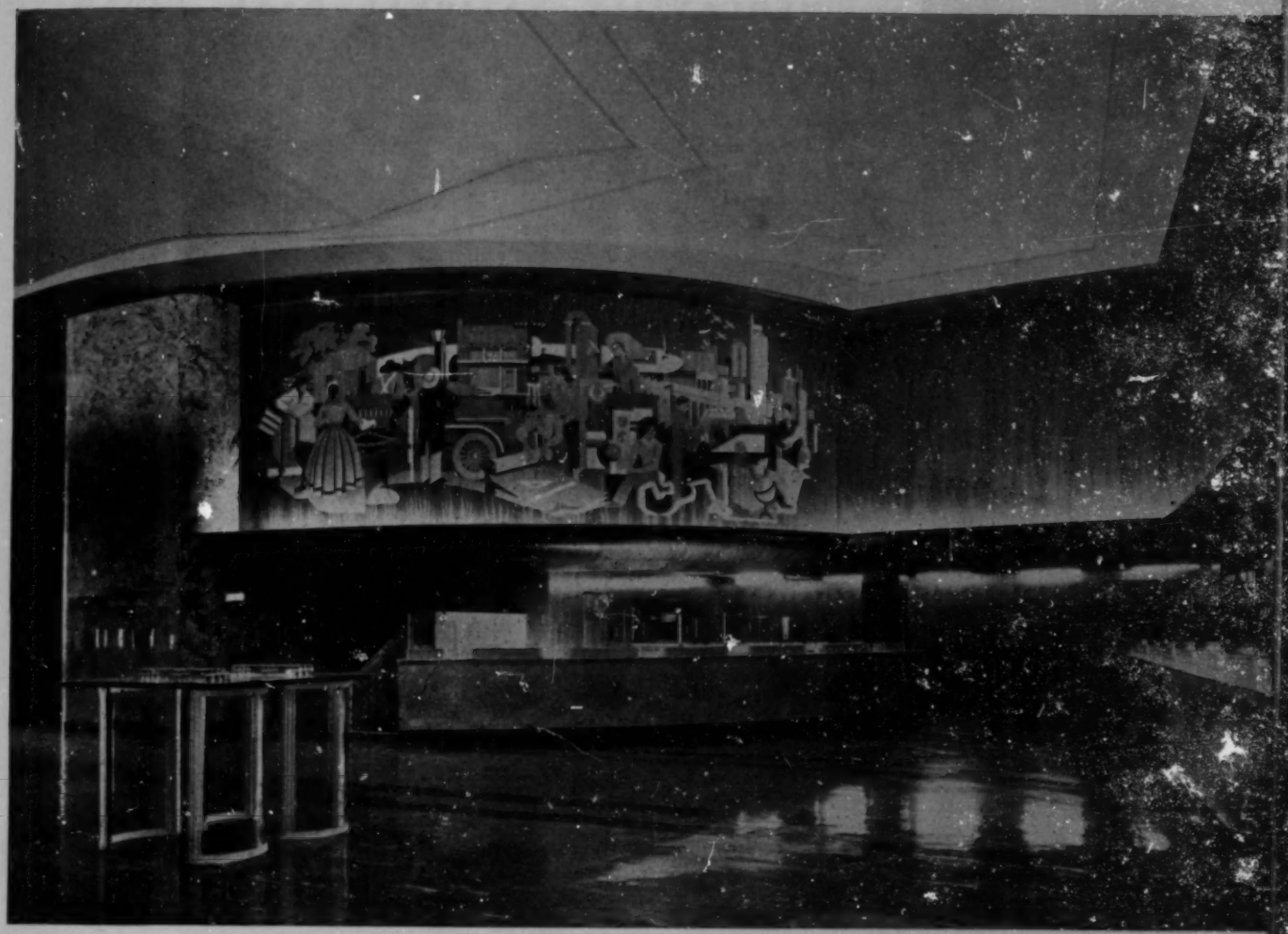
MERCANTILE NATIONAL BANK BUILDING

MAIN BANKING ROOM takes virtually all of the second floor. It is reached by escalators or stairs from main entrance, or by the building elevators. Walls are of American walnut veneered panels, with veneers matched in continuous or unfolding pattern along each wall, the west wall claiming a record for the longest continuous run, some 161 ft. Pylons, elevator lobby, counter fronts and stairway railings are of Loredo Chiaro marble. Glass introduced a novel note in the bank fixtures. Otherwise the only major decorative effort consists of two huge wood mosaic murals on the curved walls flanking the elevator landing, and a third on the opposite wall. The murals, by Buck Winn, Jr., were executed in flexwood of 16 kinds of wood.

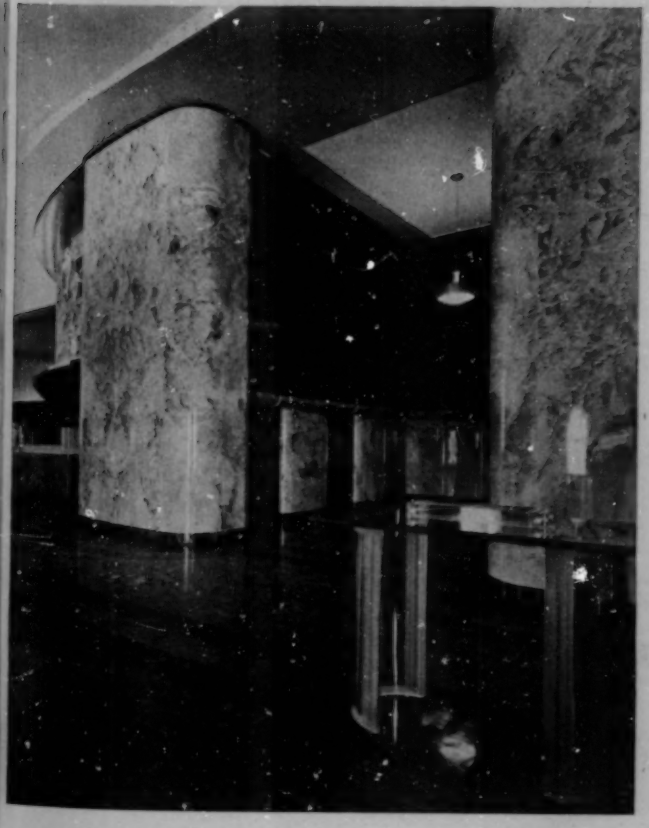




Above right: detail of all-glass teller's screens and partitions, of ¾-in. plate glass



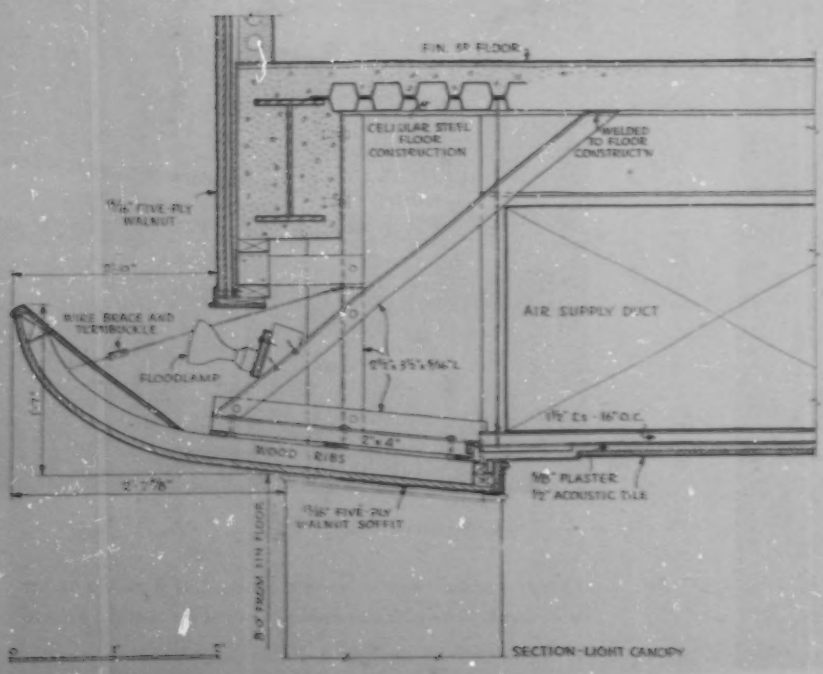
Wood mosaic murals symbolize the growth and development of the city from its simple beginning



Above: general view of long west wall of banking room
Left: bank floor elevator lobby flanked by marble pylons

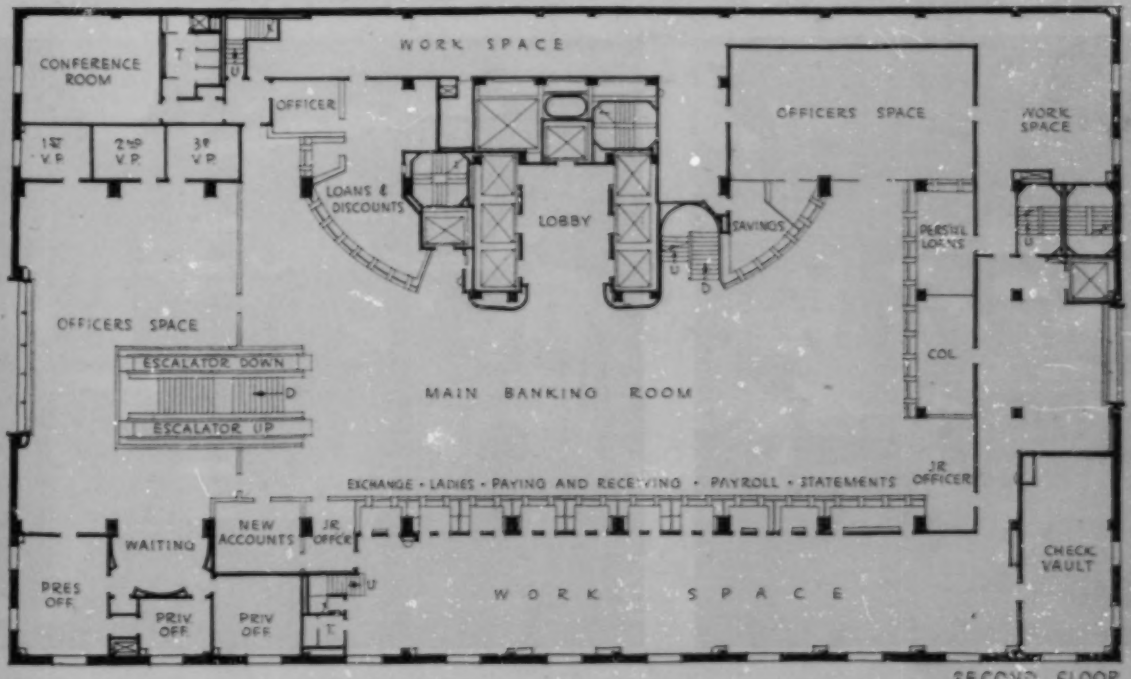
MERCANTILE NATIONAL BANK BUILDING

IN THE banking room this office building departs from the pattern of the skyscraper years of the Twenties. Happily missing are the ornate gold leaf ceilings in patterns of plaster beams, the fancy grilles and fussy columns that proclaimed a bank's prosperity. Much pre-Pearl Harbor steel went into freeing this room of columns, and the sweeping views thus achieved are fittingly developed in impressive simplicity. The effect is enhanced by totally indirect lighting from an immense cove installation above the tellers' cages (detail below). A single great window at one end, reaching the full two-story height, dominates the longer view. Long draperies in blue, green, rose and beige give it additional visual emphasis.



Indirect lighting from the walnut veneered cove splays its rays upon the wainscot to be reflected onto the ceiling and then uniformly downward to the floor. The cages are lighted by walnut veneered troughs placed on top of the glass partitions between cages. There is also a small louvered lamp on either side of the tellers' plate.

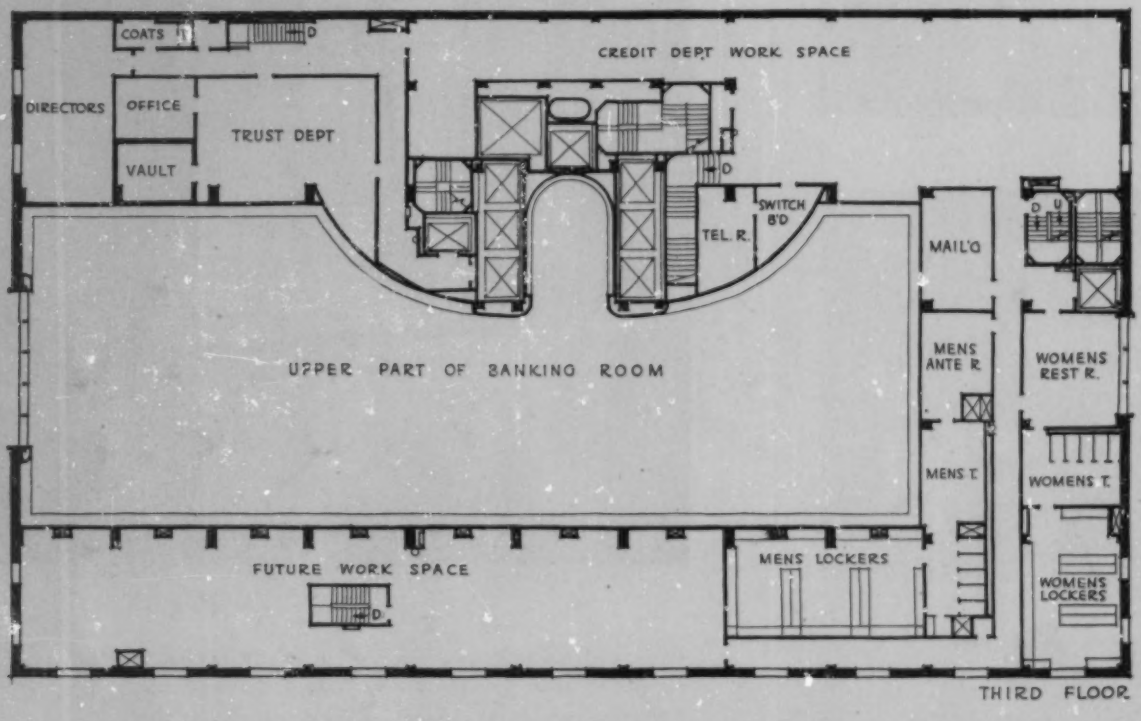
Above and top left: two views of the huge window at the end of main banking room. It is 27 ft. wide, runs from floor to ceiling. Railing in front is ¾-in. plate glass. Left: close-up of check desk, of 1¼-in. plate glass



SECOND FLOOR

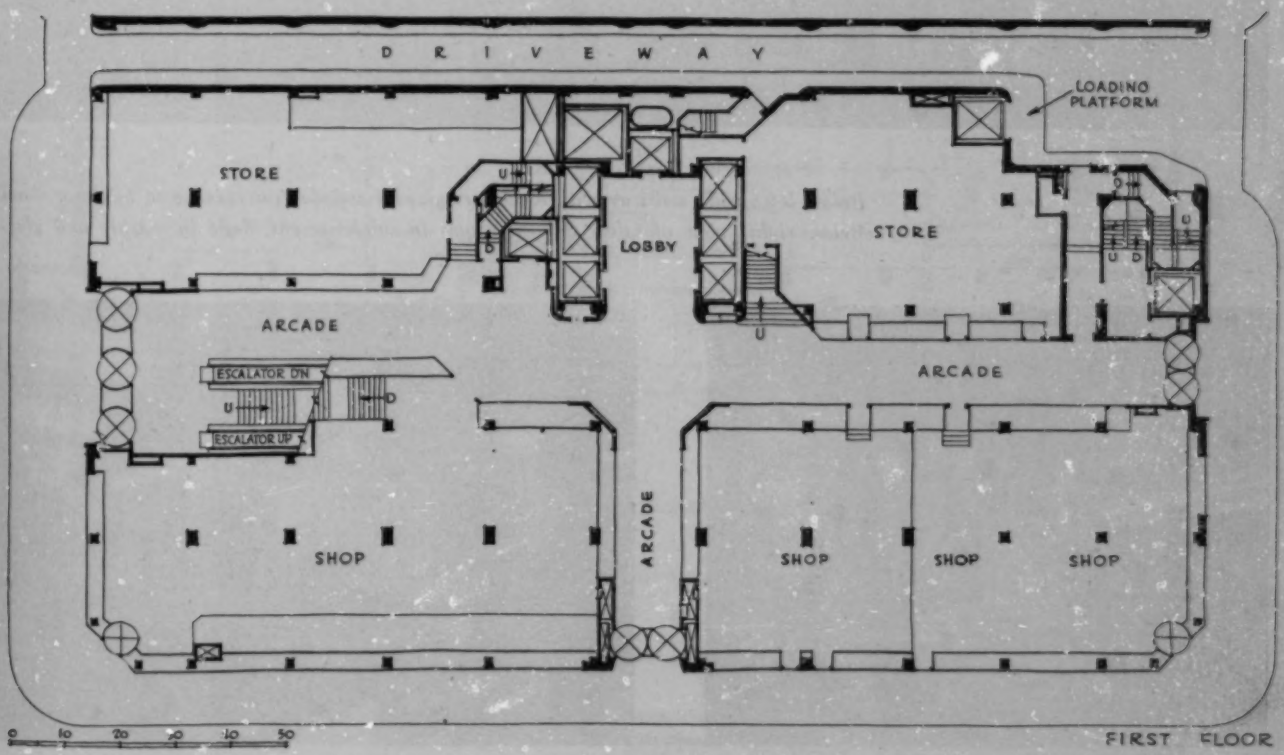
MERCANTILE NATIONAL BANK BUILDING

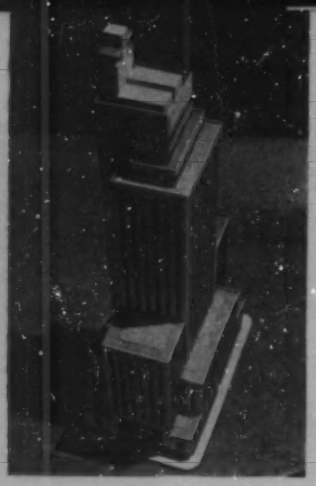
THE BANK'S quarters take up also the full third floor. The upper part of the two-story banking room of course takes the central portion, leaving somewhat more than half of the floor area for various offices, directors' room, employees' locker and rest rooms. All of the area is not now necessary; thus the bank has room for office expansion later on. The first floor is designed to take full advantage of retail values in downtown Dallas, with all possible area devoted to shops. There are, however, building entrances on each of the three streets. Main floor shop tenants have show windows along the entrance arcade. A notable feature is the interior driveway running through the building at the rear.



Bank offices on the third floor, like the rest of the building, are completely air conditioned. Ceilings are of acoustic tile, lighting fluorescent. All flooring is asphalt tile

View of main floor arcade, as seen from the center of the building, where the separate arcaded passages join with the elevator lobby. Note show windows beyond directory

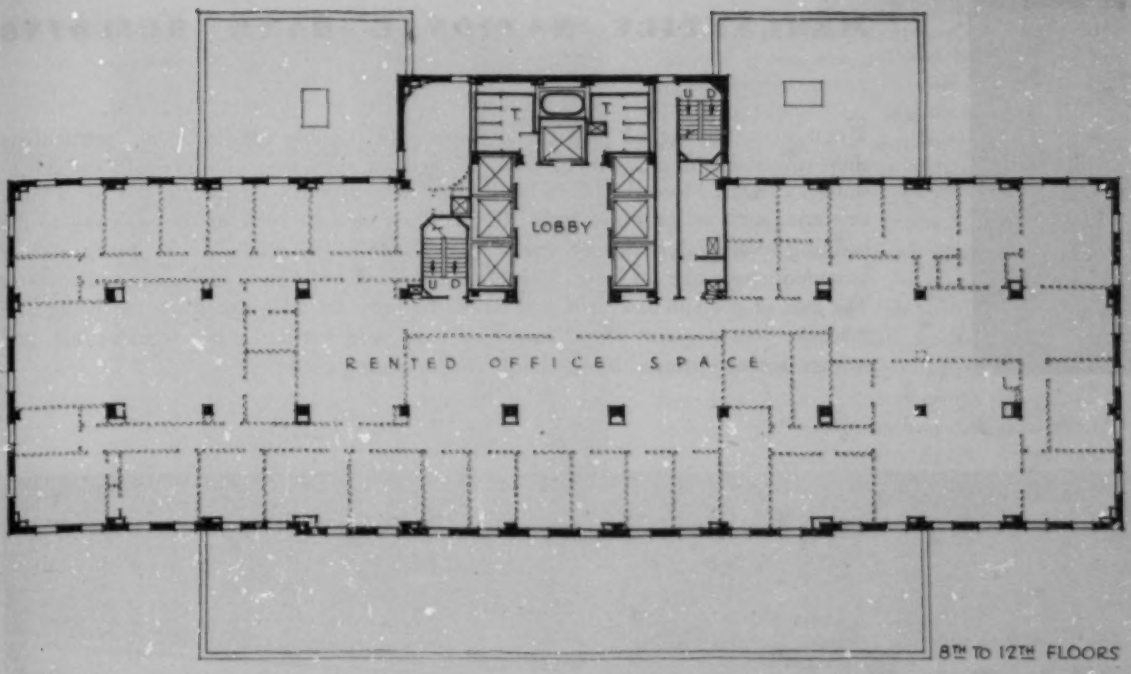




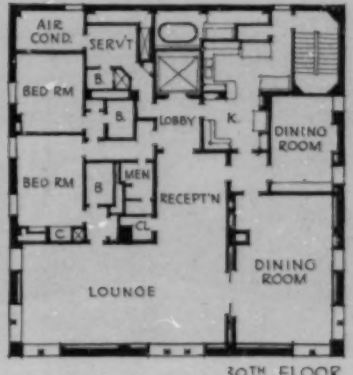
MERCANTILE NATIONAL BANK BUILDING

THE MAIN floor arcade and elevator lobby, like the rest of the building, are notable for a complete lack of ornate embellishment. Simple lines give emphasis to large panels and pylons of St. Genevieve marble. Lighting is totally indirect, there being not a single visible light fixture. Cove lighting is arranged in various large ceiling panels over elevator lobby, stairs, and so on. Additional lighting is supplied as required by smaller cove installations over high marble wainscots and over the elevator doors. Coves over elevator doors are louvered to let a small amount of light leak downward to illuminate doorways to the cabs.

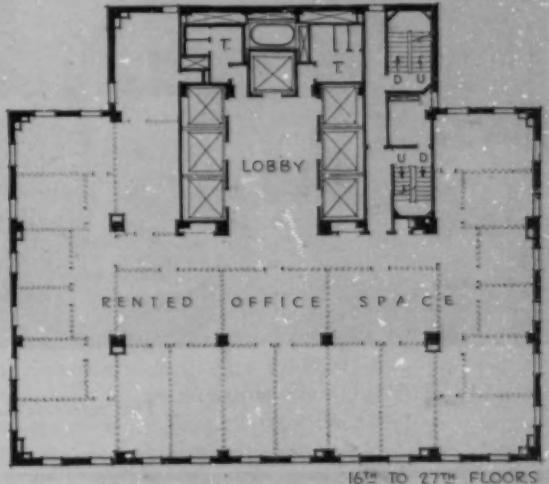
Below left: wide stairway with escalators gives first-floor convenience to banking room. Below right: view of safety deposit rooms in sub-basement, done in marble and glass



8TH TO 12TH FLOORS

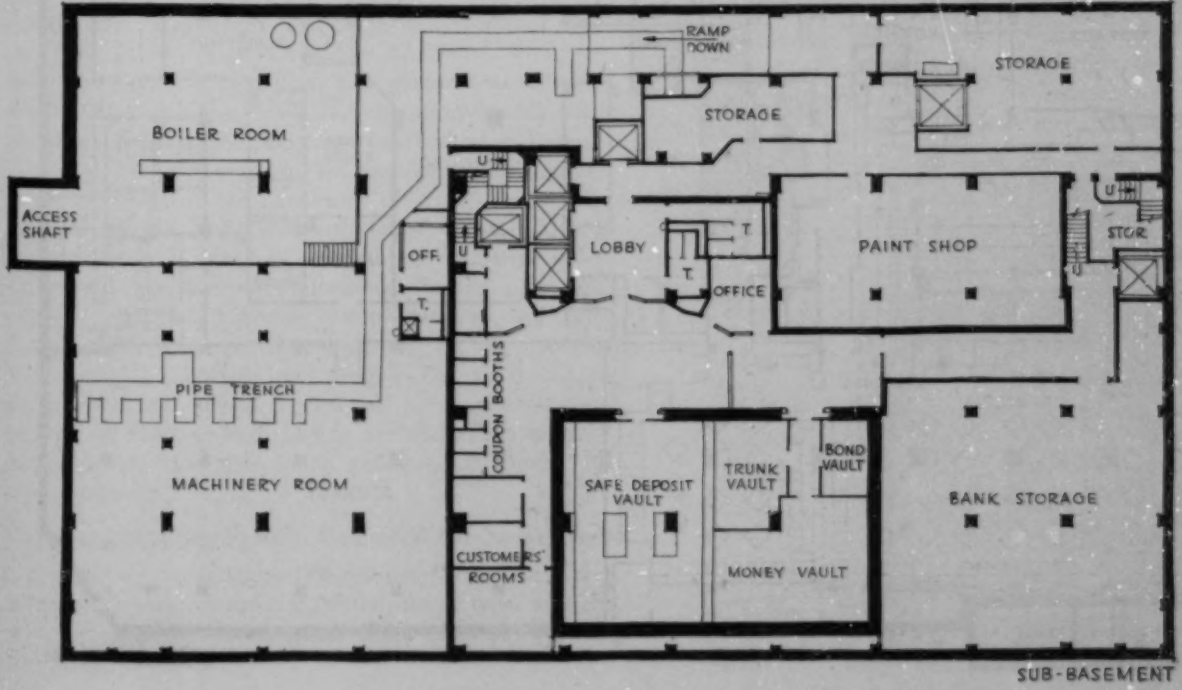


30TH FLOOR



16TH TO 27TH FLOORS

Plans of typical rentable area on office floors. Thirtieth floor is club room and living quarters for guests and officers of bank

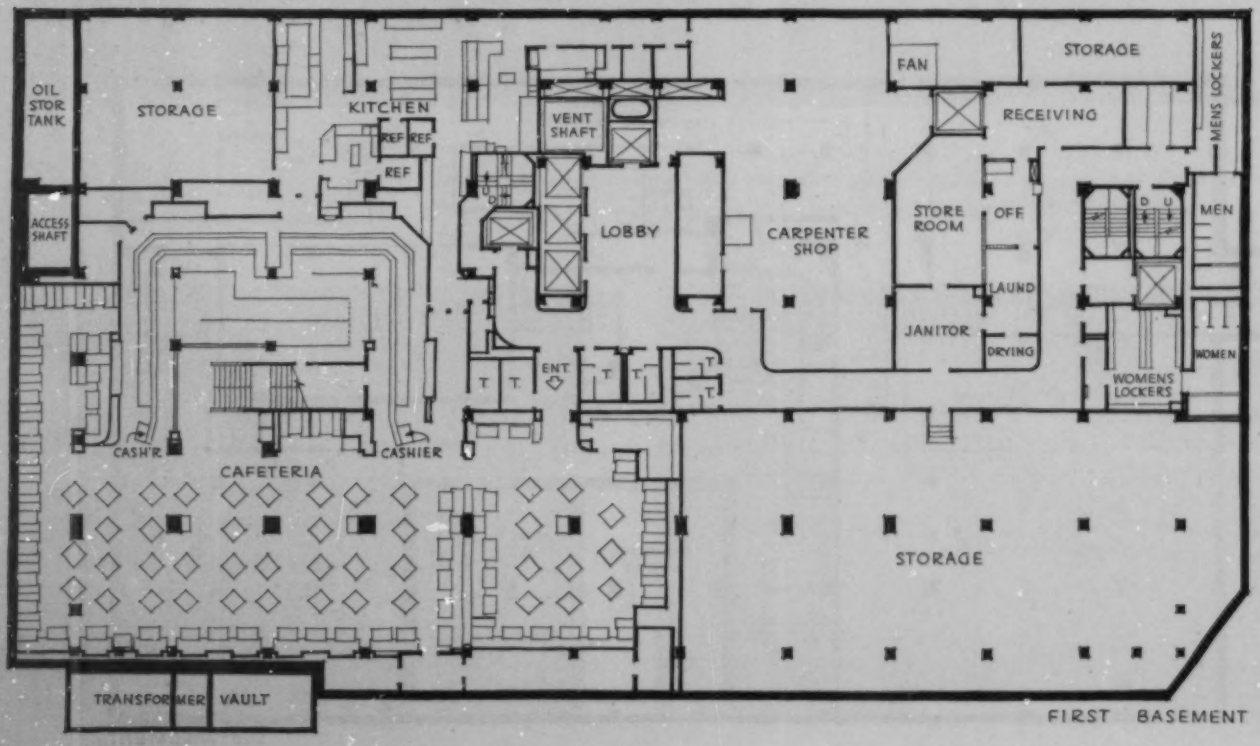


SUB-BASEMENT

MERCANTILE NATIONAL BANK BUILDING

FOLLOWING the logical plan of developing all possible revenue areas, particularly shop spaces, the first basement was arranged for such tenancies as could use downstairs locations. More than half of the basement area was quickly taken for a large cafeteria, with an entrance from the main arcade just back of the stairway to the banking room. Safety deposit vaults were placed in the sub-basement, to leave other basement space free for lease. A separate elevator for the bank serves the vault rooms. The rest of the sub-basement and basement provides adequate space for boiler and machine rooms, paint shop, carpenter shop and various other maintenance and storage rooms required by the bank and operating crews.

The cafeteria follows the bank's decorative restraint, with mirrors, murals, cove lights



It will have been noticed, through these brief comments, that the Mercantile National Bank registers some important advances in skyscraper design since the decorative days of 1929. Through the hiatus in skyscraper construction these advances have been seen in many other types of buildings; it is interesting to see them appearing here in the office building. Besides the commendable simplification of decoration, there are logical developments in materials and equipment. Glass was used in new ways, all of them logical—heavy bent plate glass for tellers' cages, partitions, railing screens, check stands. Newer lighting techniques have been utilized very effectively, especially in developing the open sweep of the high, column-free banking room. Colorful marbles have been used in the modern manner, in impressive masses, not in the bits and pieces of a more cluttered decorative era. Notably successful, too, is the use of walnut veneers and plywoods, also in huge impressive areas without a lot of scroll-saw work. The wood mosaic murals done with wood veneer in the wallpaper manner, are not a new idea, but they do achieve a noteworthy quality in the size and intricacy of the work and in the extensive selection of woods.

A notable exception in this list of new materials ideas is the metals. And that lack will be understood as a wartime necessity. The architect had planned some novel metal uses in bank fixtures, but the shiny metals were sent to the aircraft factories. Many cast bronze and aluminum grilles, already made for this building, were returned to the government for remelting; the final grilles were made of marble. Some miles of copper tubing was also bought and paid for, but released for war use. Wood doors and wood trim were substituted for the metal ones originally specified. Likewise cast bronze and cast white metal hardware was stricken from the list, and government-standard hardware used instead. The air conditioning system was allowed to proceed, but two huge compressors of 550 tons each had to be canceled in favor of two used ones that were found available and suitable for the installation.

Air Conditioning System Balanced for Solar Heat

The air conditioning installation incorporates two types of systems: the conventional central-station type, and the "conduit system," (with room units as shown in the diagram).

The central-station system supplies conditioned air to interior spaces not affected by sunlight and to some exterior rooms on upper floors used for utility purposes. The conduit system maintains desired conditions of air in exterior rooms so that each may be held at the temperature most comfortable to the occupant. Individual control of the second system provides such flexible operation that a room on the shady side of the building may be heated at the same time that a room on the sunny side is being cooled.

The conventional air conditioning system serves the central areas of floors from the fourth to the twenty-seventh level. Ducts and outlets are located overhead. Each floor has one or two sets of equipment, each set consisting of a fan and motor, cooling coil, dampers, drip pan, filters, and supply and return ducts. A heating coil is located in the outdoor-air intake to each apparatus. Cold water is circulated through the cooling coil, the water being supplied from the main refrigerating system.

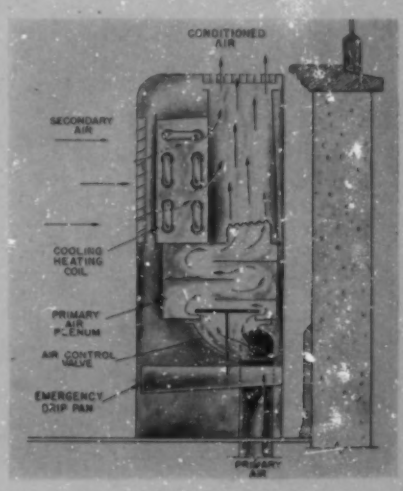
Conventional duct-type air conditioning systems serve the sub-basement banking areas, basement and first-floor shops, and the 28th, 29th, and 30th floors. Banking areas on the second and third floors are air conditioned by a central-station system laid out for four-zone control. Chilled water for cooling and dehumidifying the air is supplied from the main refrigerating system.

Exterior rooms having walls which receive direct sunlight anytime of day, are equipped with conduit system units. They are a part of an air conditioning system which consists of:

1. A central system which conditions only that quantity of outdoor air required for ventilation. This system is much smaller than the conventional system which conditions *both* ventilation and recirculation air.

2. Conduit ducts for distributing the air at high velocity to the room unit. These ducts are only 15 to 20 per cent as large as conventional ducts. Conduits this small can be used because (a) smaller quantities are circulated and (b) the air circulates at high velocity.

3. Room units receive, through nozzles, air at such velocity as induces an airflow *from the room* through the unit. The "primary" air from the apparatus induces a "secondary" air flow (recirculated from the room) equal to four times the volume of the "primary" air. The "secondary" air is heated or cooled by setting the recently-patented "thinking valve" to the temperature wanted. Chilled or heated water will pass through the coil over which the "secondary" air flows, according to the valve setting.



FOR AN ARCHITECT'S MOST CRITICAL CLIENT

Suburban Residence at Camp Hill, Pennsylvania

Designed for himself by James W. Minick, Architect

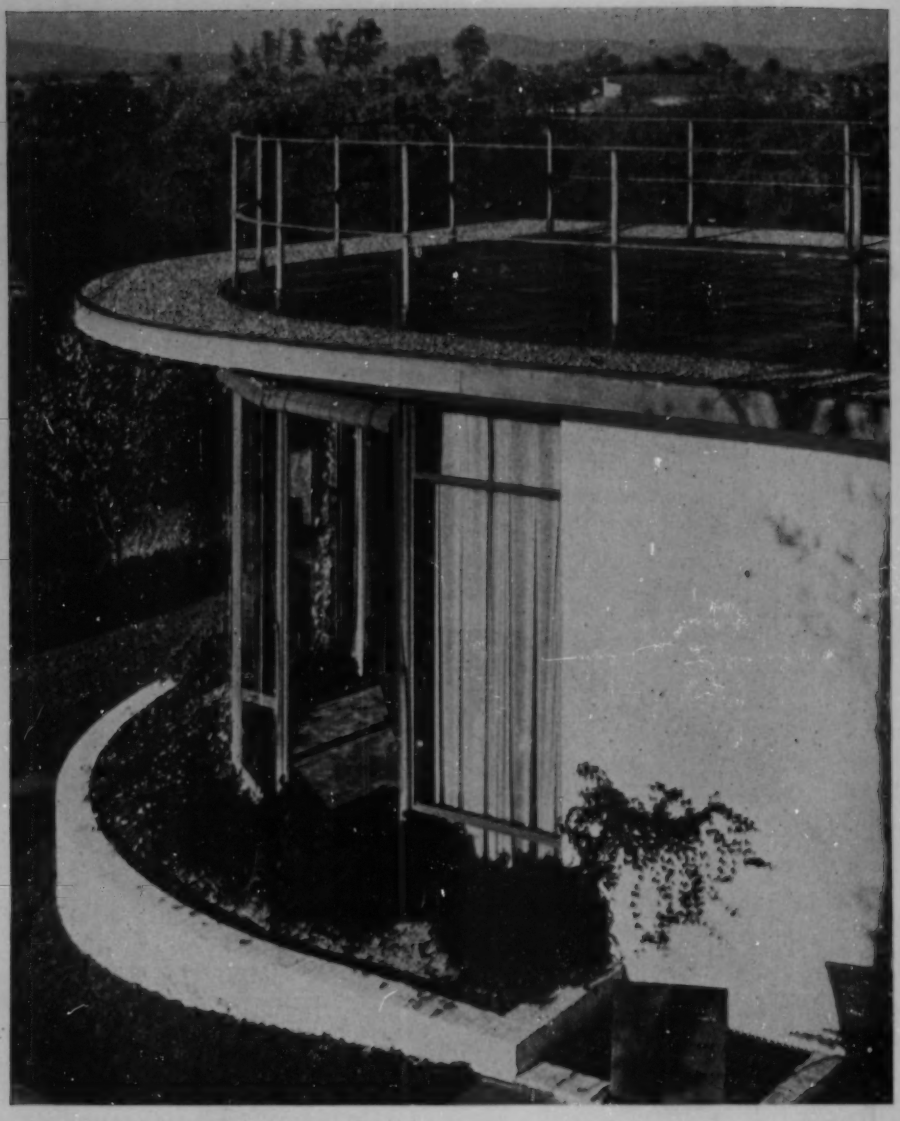
IT IS ALWAYS interesting to see what ideas an architect will develop when he builds his own house, particularly when he lets himself go all out, unfettered by site limitations or neighborhood restrictions. Mr. Minick's house affords a splendid example. Located in a suburban section near Harrisburg, the house is fitted into the sloping terrain of a three-acre plot, with the main fenestration toward the mountains. It was a logical spot for the modern type of open plan. The cross placing of the second story, using the garage for support, made a number of functional contributions. Extending over the driveway, the second floor provides a porte cochere at the main entrance. Such placing also gives exceptional privacy for the principal bedrooms, and leaves the roof over the living room wing for a deck. And deck and bedrooms are well oriented for mountain views. The motor court is worth

noting, if only for its size; here the typical suburban problem of parking space and a turn-around for guests' cars will not be a nuisance. The court is partly cut out of high ground between house and highway; the high ground, incidentally, serves as a baffle between the house and the highway traffic.

The plan is tied in with extensive gardens by terraces off dining and living rooms as well as off the architect's studio. Dining space is segregated from the living room by draw curtains, and wide folding doors open it to the dining terrace.

Exterior walls are of brick, painted white; trim blue-green. First floor of concrete construction, second of wood framing, with stucco on all overhangs.

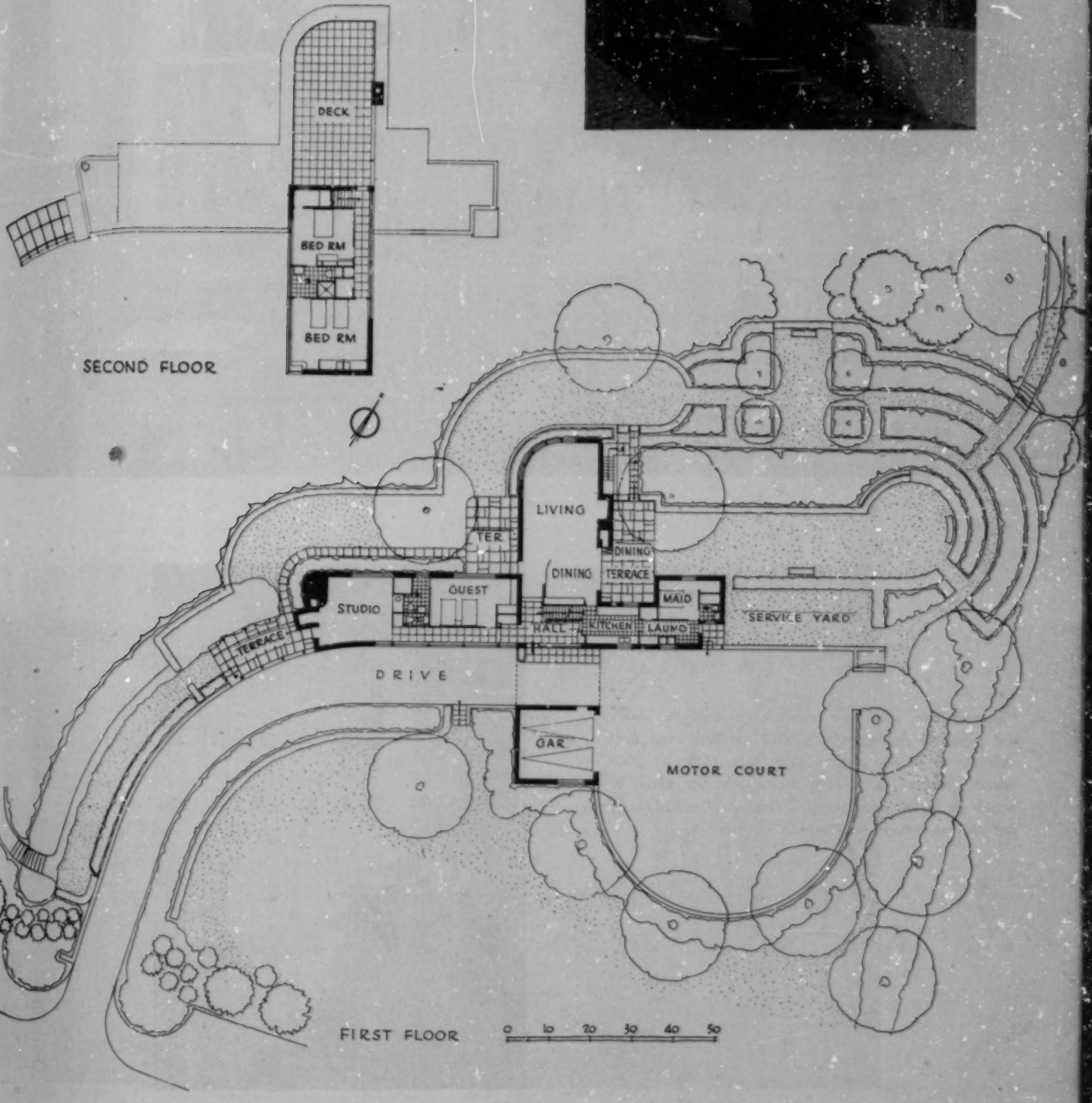
Main entrance, done with severe simplicity, has a sort of porte cochere provided by the cross-placing of the second floor. Glass block in a large panel lets in daylight for the entrance and stair hall



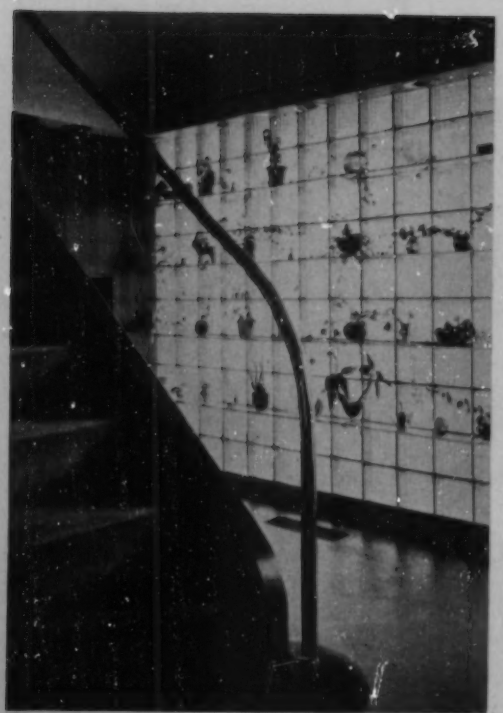
Living room, roof deck and terrace for enjoyment of mountain views and formal planting

Dining terrace is partly roofed over to shield it from direct sunlight; steps lead down to formal gardens; wall in foreground hides basement stairs

A sloping site of three acres in an open suburban location made very logical the open type of plan with the cross-placing idea carried to the ultimate. Wings are oriented for mountain views to northwest and gardens to northeast, away from the highway



Plywood and glass are extensively used in interiors, the plywood for wainscots, wall surfaces, and built-in cabinets as in the dining space shown above; glass in mirror panels, in sliding doors, and in glass block panels as in the entrance hall (right). Wardrobes, dressing tables, bar, bookcases are all built-in



Right: looking out to dining terrace. Living room (below) has painted canvas walls; fireplace is of Virginia greenstone, with concealed log storage at right. Floor concrete, carpeted

FOR OUTDOOR LIVING ON A NARROW LOT

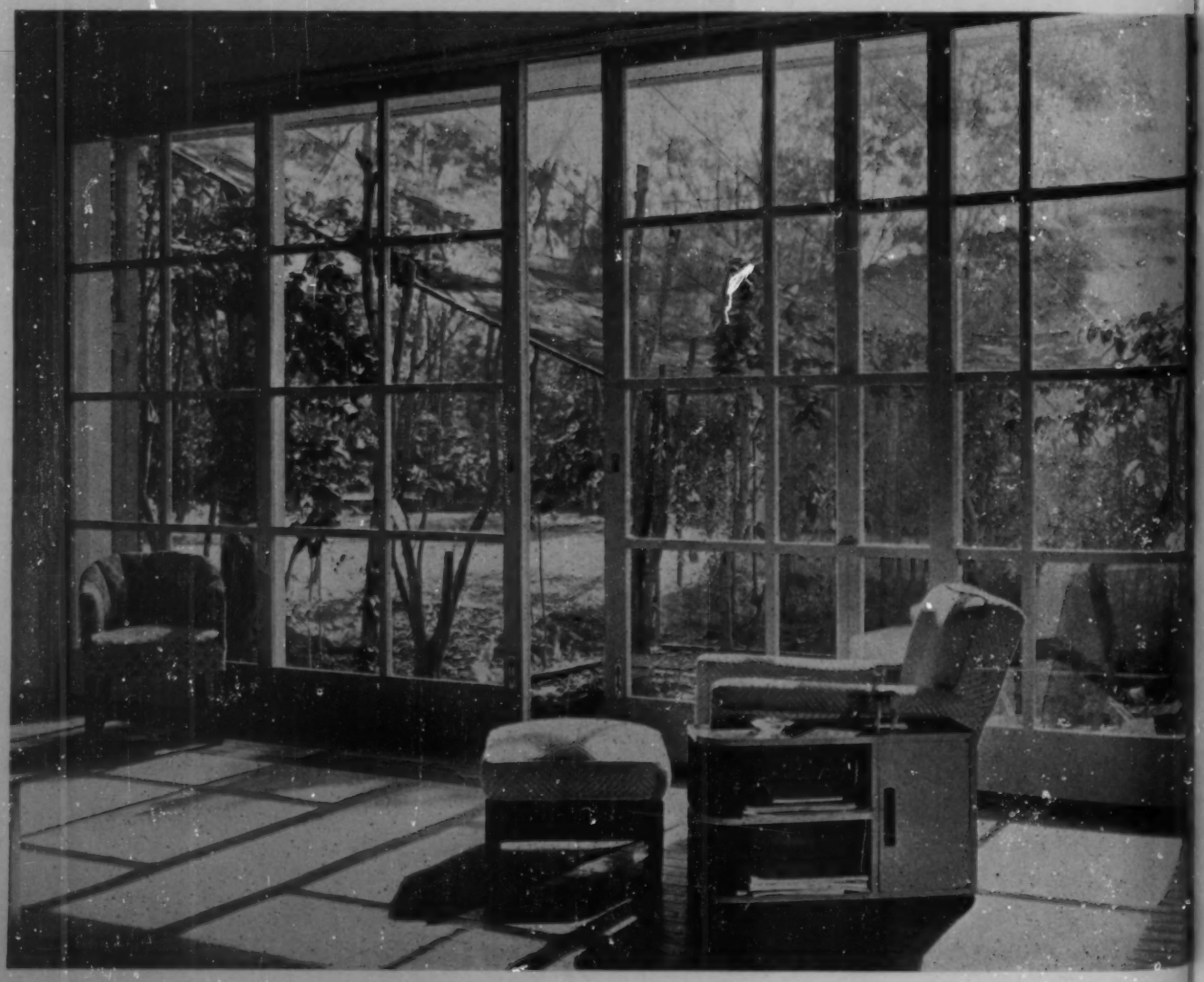
Residence of Mr. and Mrs. T. Trip Russell, Miami, Florida

Polevitzky and Russell, Architects

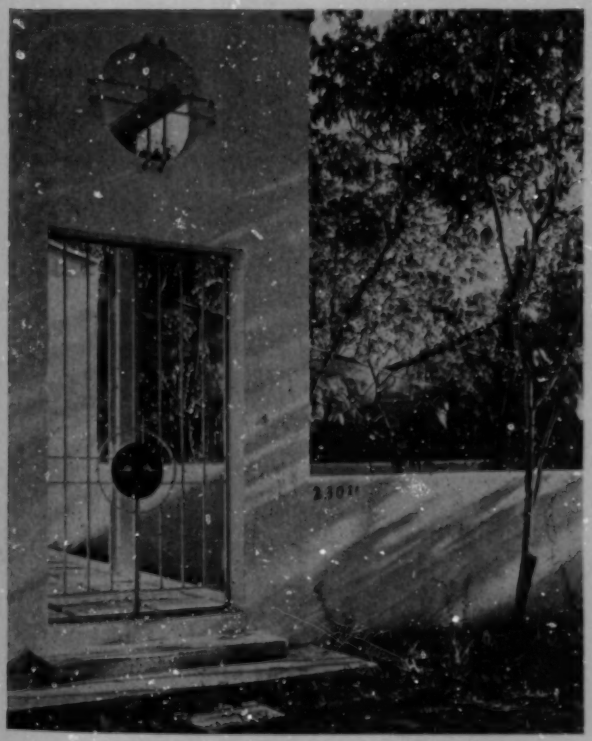
WHEN this architect set about the design of his own house he found some fairly typical problems. The narrow, deep lot was the principal one, and was complicated by the necessity for taking much frontage for a two-car driveway; also by the fact that the desirable exposure was on the long side of the lot. And of course he wanted to take advantage of Florida's invitation to outdoor living. He also wanted to demonstrate that amenity values in a house need not necessarily burst through the budget; the construction cost here was under $7,000.

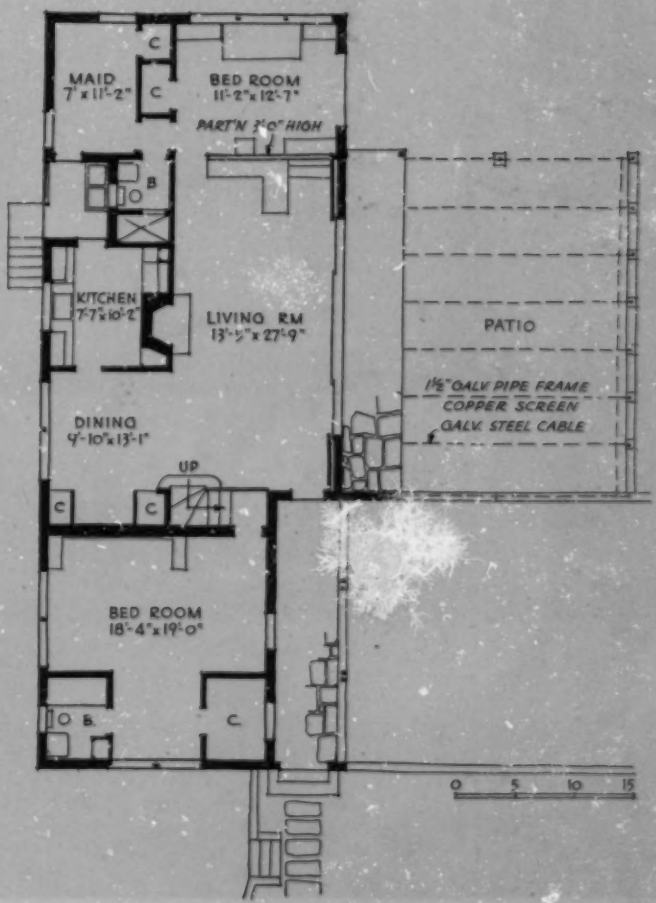
The half-sunken garage saved on cubage, and also prevented the garage doors from dominating the front elevation. The entrance treatment and the development of the side garden, with its enclosing walls, further subdue the garage doors.

Indoor-outdoor living achieves a nice integration in the combination of the open-wall living room, its huge sliding doors opening into a patio which is completely enclosed with copper screening. Thus the patio is just as useful as a screened porch, but is still truly outdoors.



If, in the interests of outdoor living, a rear location is best for the living room, why worry about a long entrance hallway? Why not simply leave the entrance hall outside in the garden?





There are occasions when the living room, no matter how large, doesn't seem large enough, when the rest of the house, for the moment, is just waste space. In this house the idea of combining dining room and living room is carried one step further: one of the bedrooms is also combined with the living room. A three-foot-high partition provides wall space in both rooms; above that a sliding curtain makes it possible to separate or combine the two rooms

It isn't quite true, as the lower picture would suggest, that trees are growing in the living room. But with the sliding doors open, the verdure of the patio does become a part of the living room scene. The total enclosure of the patio with copper screen, on a framework of galvanized piping, keeps insects out of the living room, but still permits plants to grow in the patio

PLANNING NOW FOR POSTWAR LIVING

Postwar Design for a Residence in Massachusetts

David J. Abrahams, Architect

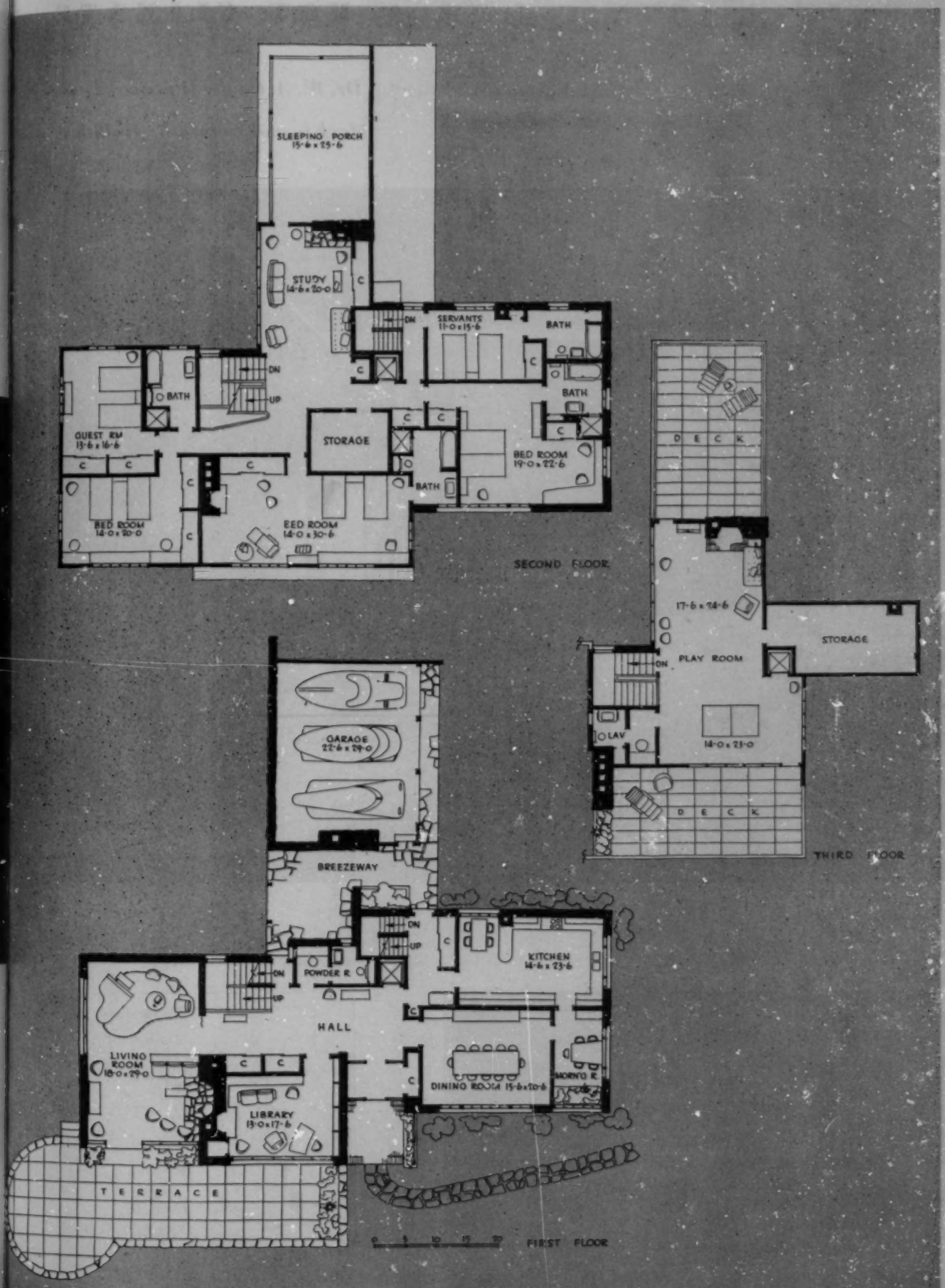
ASK ANY GROUP of architects what kind of assignment they like best, and the majority will answer, "A $50,000 house." They might go on to bemoan the fact that such assignments have lately been all too rare. But here is evidence that the expensive residence is not entirely a thing of the past; perhaps it is a bit of evidence that there will be more of them in the future. If the promised building boom develops after the war, along with an era of material well-being

it seems permissible to assume that the age-old desire for a fine home will find expression.

One may guess that the architect who did this postwar design got additional satisfaction out of the fact that it was advance planning. Certainly now is an ideal time for the planning of such a house as this. Beyond the satisfaction of thus adding to the shelf of projects ready for immediate postwar building, there is the opportunity for unhurried conferences with the client.

The house is designed for southern exposures. To be located on a two-acre site in Newton, Mass., with outcroppings of ledge rock, the house uses stone in many exterior walls. It will "probably be New England braced wood frame, well insulated. . . . Steel beams and Lally columns . . . as required."

Beyond that, as befits a postwar scheme, the specifications are open as to materials and equipment. "It is hoped that finished flooring of the 'Impreg' or 'Compreg' type of material . . . will be available. Plywood is being considered and so is linoleum, tile and other good materials where their use is rational." A precipitation air cleaner is being considered, so is panel heating.


SLEEPING PORCH
15-6 x 25-6
STUDY
14-6 x 20-0
C
DN
SERVANTS
11-0 x 15-6
BATH
BATH
UP
BATH
GUEST RM
13-6 x 16-6
STORAGE
BED ROOM
19-0 x 22-6
BATH
BED ROOM
14-0 x 20-0
BED ROOM
14-0 x 30-6
SECOND FLOOR
D E C K
17-6 x 24-6
STORAGE
PLAY ROOM
LAV
14-0 x 23-0
D E C K
THIRD FLOOR
GARAGE
22-6 x 29-0
BREEZEWAY
DN
UP
KITCHEN
14-6 x 23-6
POWDER R
HALL
LIVING ROOM
18-0 x 29-0
LIBRARY
13-0 x 17-6
DINING ROOM 15-6 x 20-6
MORN'G R
TERRACE
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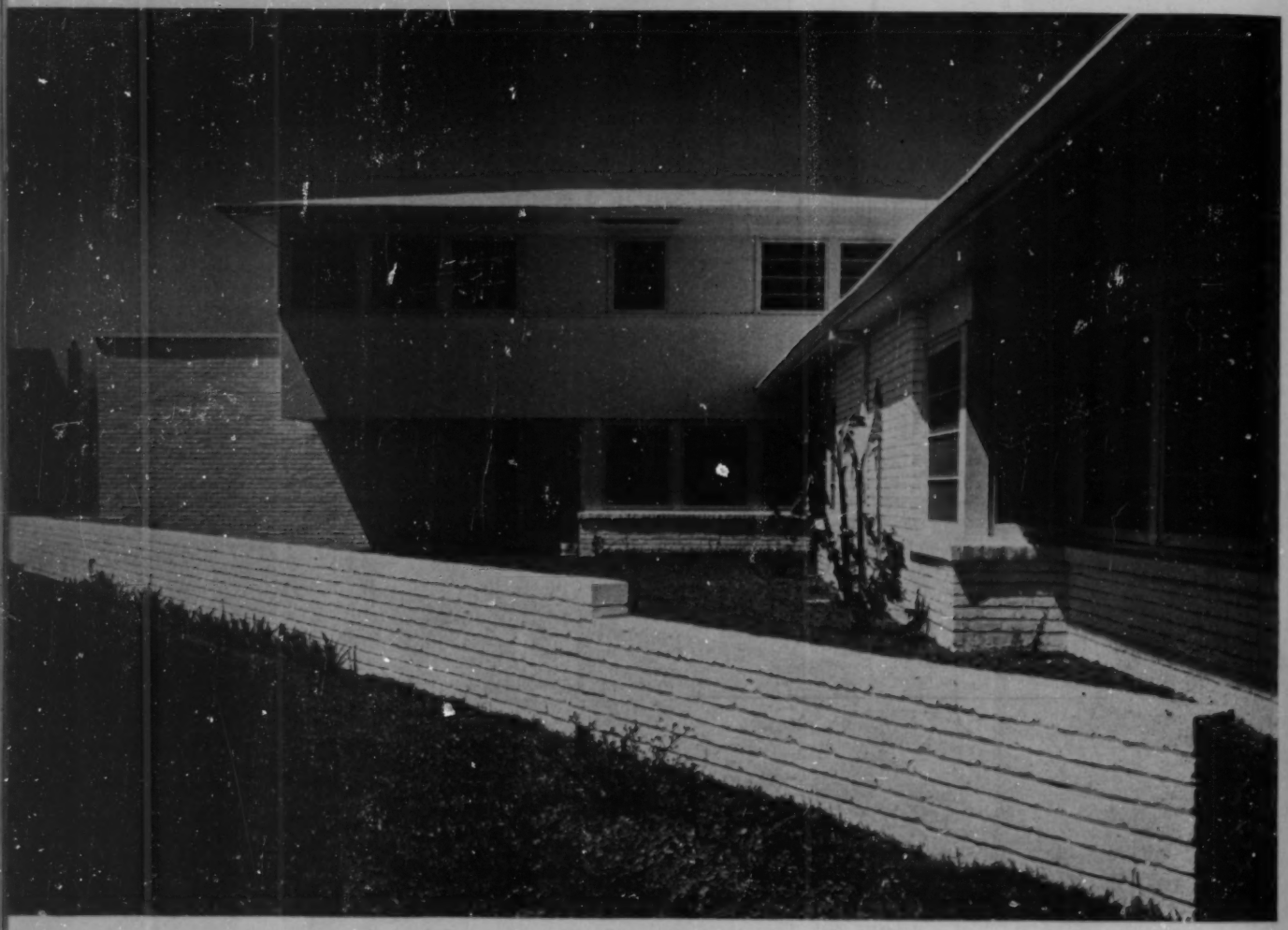
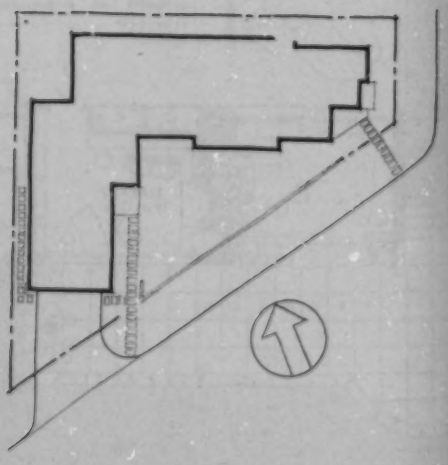
FIRST FLOOR

MEDICAL CLINIC FOR A HOT CLIMATE

Clinic and Residence for Dr. W. A. Coole, Houston, Texas

MacKie and Kamrath, Architects



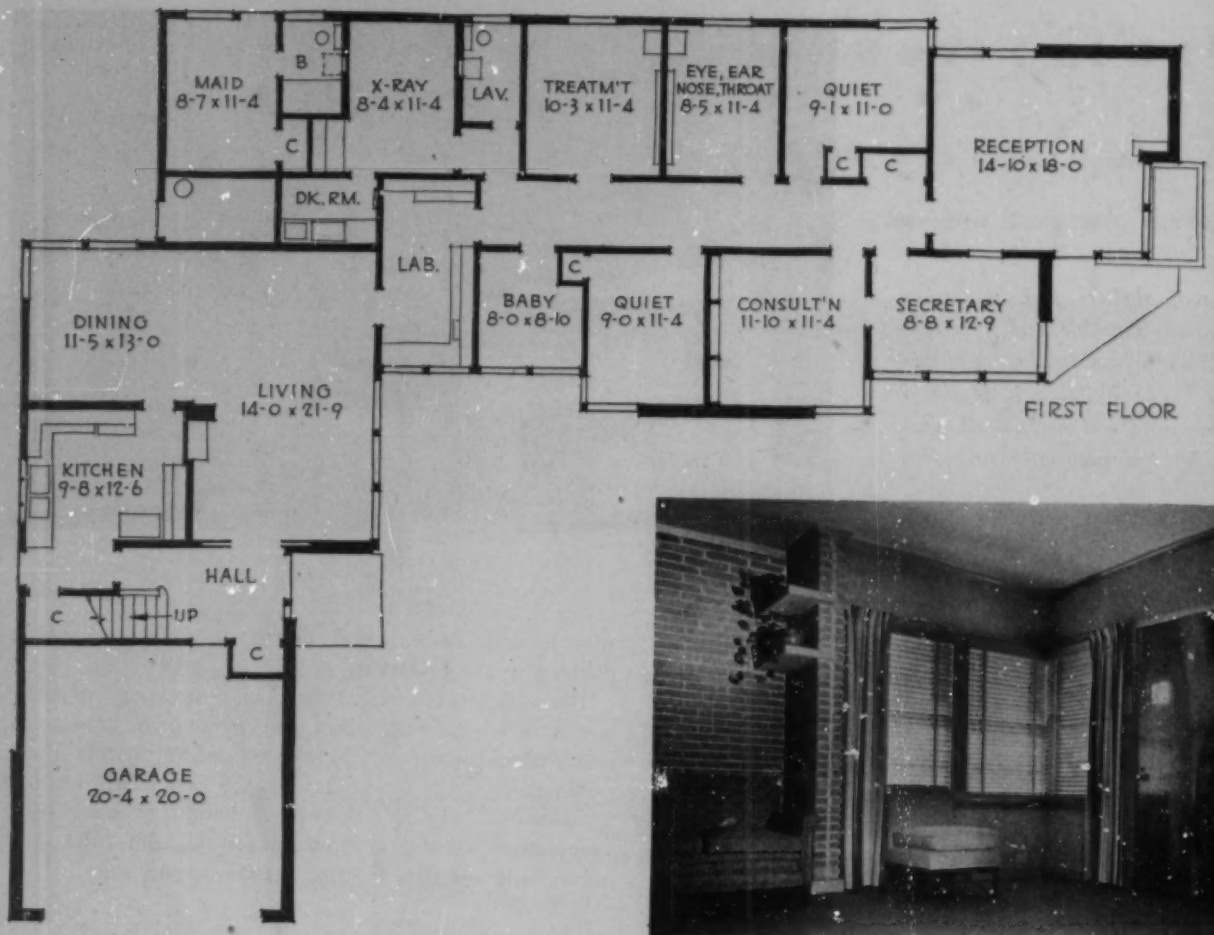


Small and irregular in shape, the site still permitted an entirely logical building

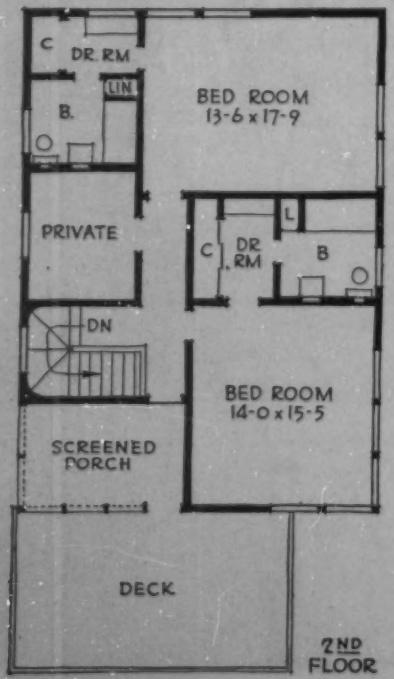
Wide roof shelters give protection from intense sunshine, and from sudden and unpredictable showers of this climate. The building is insulated with rock wool, and mechanically ventilated by two automatic attic fans

DESPITE these handsome photographs, this building is one that disproves the popular fallacy that architecture is just the making of pretty pictures. Here the problems were essentially practical, the result especially good. The client needed extensive clinic facilities, and a residence, on a site chosen for its location, not its proportions. The building must express its medical purpose, must be attractive, must come within a rigid budget. Best testimony as to the success of the plan is the fact that the client, who already had a good practice, found his clientele doubled in the first year.

The exterior was given particular attention; painting it a pure white, with pastel gray-green trim, gave it an immaculate appearance. Roof of white marble chips enhances this effect, also lowers the inside temperature by some six degrees, through radiation of solar heat. Foundation is solid concrete; walls of solid brick and frame with exterior plywood on the second story.



Right: views of interiors of reception rooms in the clinic section, and one of the consultation rooms and laboratory



AIRFORM HOUSE FOR A DESERT COLONY

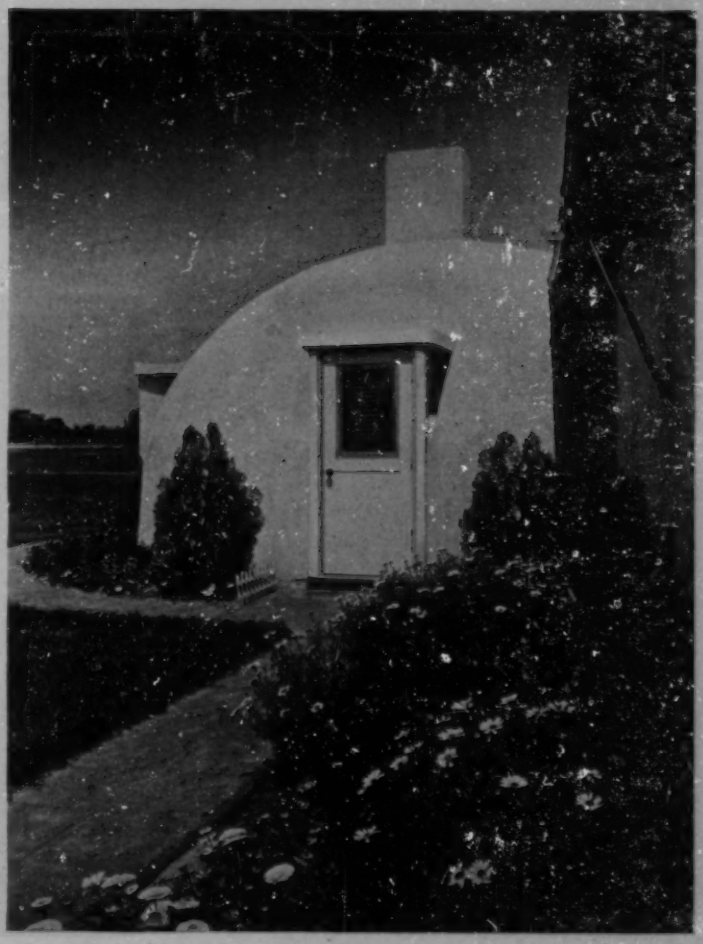
Residence of Mr. and Mrs. Titus
Goodyear Farms, Litchfield Park, Arizona
Wallace Neff, Architect

ONE OF A GROUP in an attractive desert colony, this house demonstrates one of the logical uses for the "airform" concrete construction, done by blowing concrete onto an inflated balloon.

After the floor slab is laid, the form is put in place and inflated with a standard rotary blower. The form is of cotton fabric, airproofed, and re-used many times. The air pressure need not be high: something like 1½ oz. per sq. in. Door and window assemblies are placed against the form, and are shot in as an integral part of the structure.

After a 1-in. coat of concrete is placed over the form, with a pneumatic gun, an insulating coat is applied, followed by another concrete shell 1½ in. thick. With the insulation and the high interiors, Mr. Neff points out, the house is ideal for desert country.

Interior plaster throughout is egg-shell white; soft pastel desert colors are used in the draperies and furniture. The exterior is painted white, with very bright colored sash and trim.

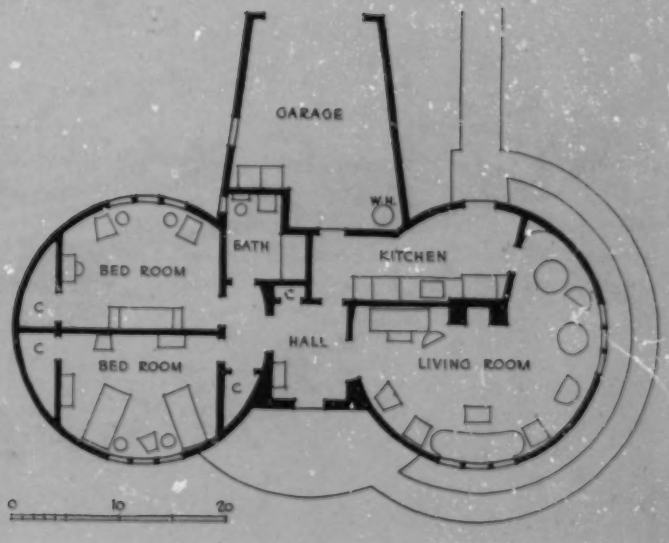


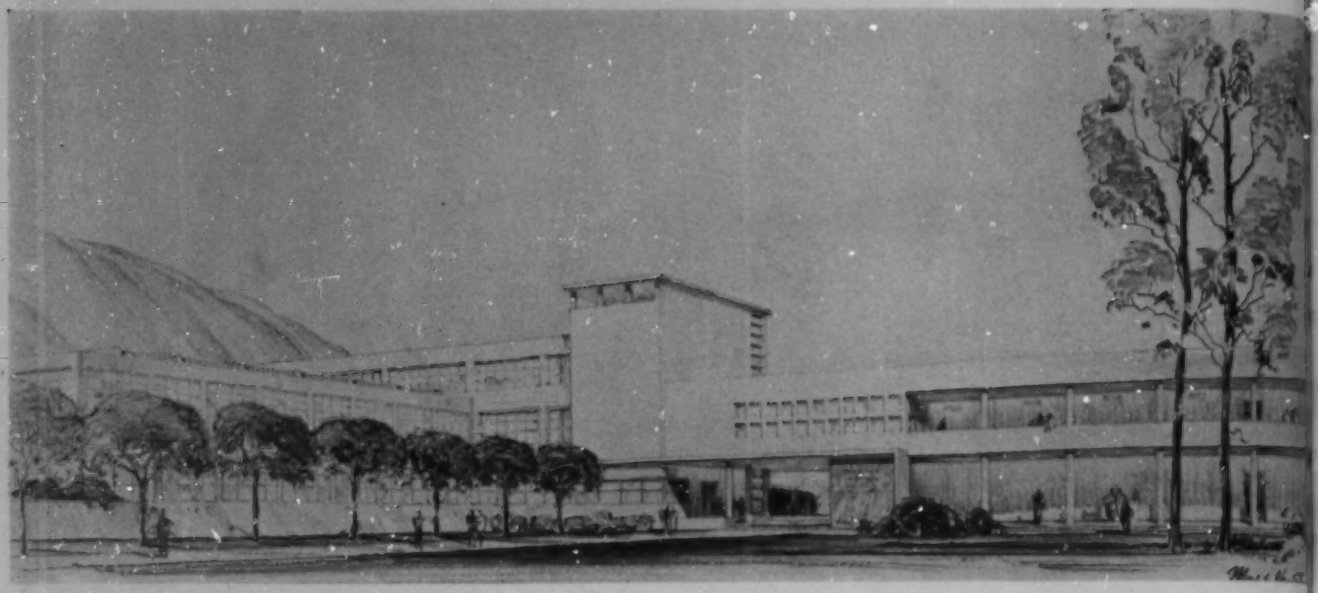
Each half of this four-room house is a pneumatically placed concrete "bubble," the two halves joined in the front by an entrance hall, in rear by a garage. Forms are inflated fabric balloons

Maynard L. Parker photos

At the top, interiors take the curves of the balloon form, which is elliptical in the vertical plane. By starting with the concrete at the top, and working from the top down, the form is somewhat flattened, and the side walls are straightened toward the bottom (view, right)

Above, view of the living room looking toward the outside wall. Interior surfaces are plastered with an insulating acoustic material in a 1-in. coat. In this house the walls and ceilings are eggshell white. Desert colors in pastel shades in furnishings





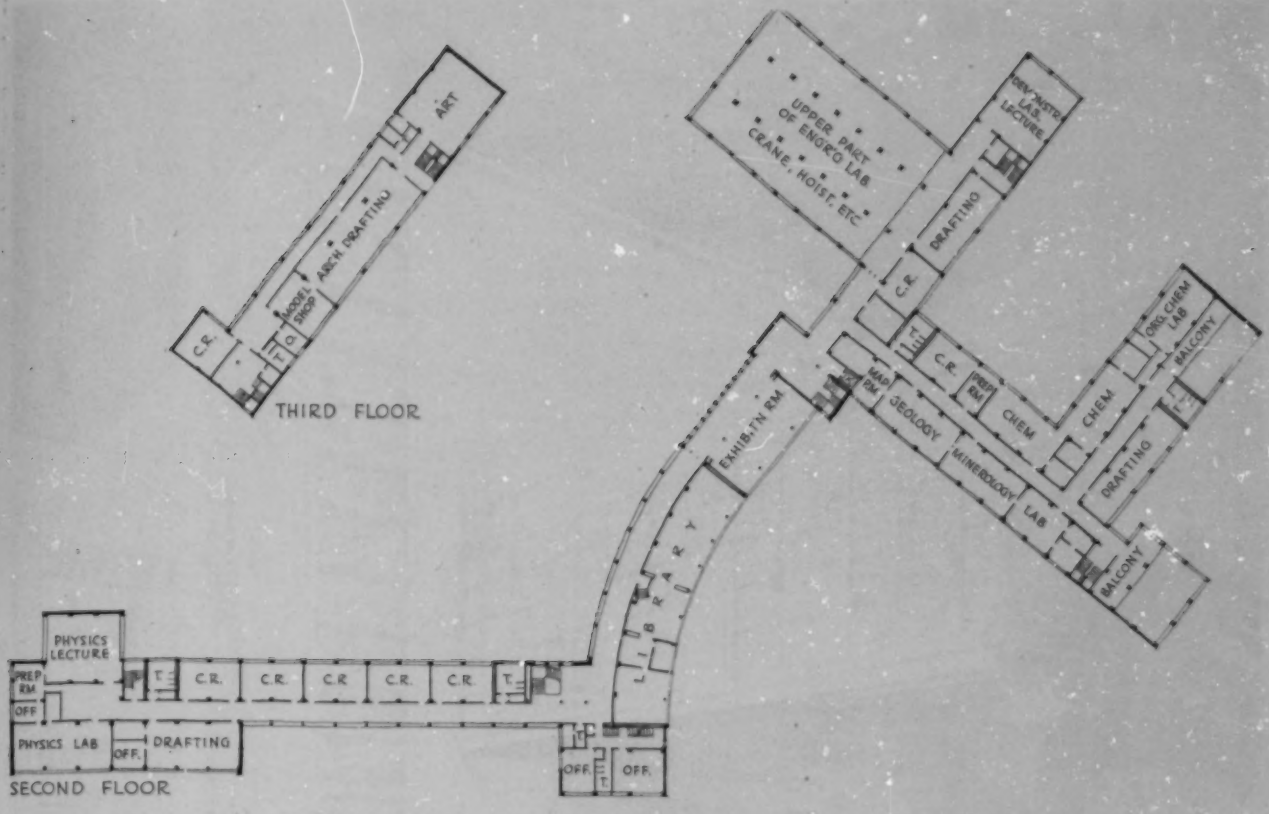
NATIONAL SCHOOL OF ENGINEERS FOR PERU

Instituto Nacional Politecnico Superior, Lima, Peru

Moore and Hutchins, Architects

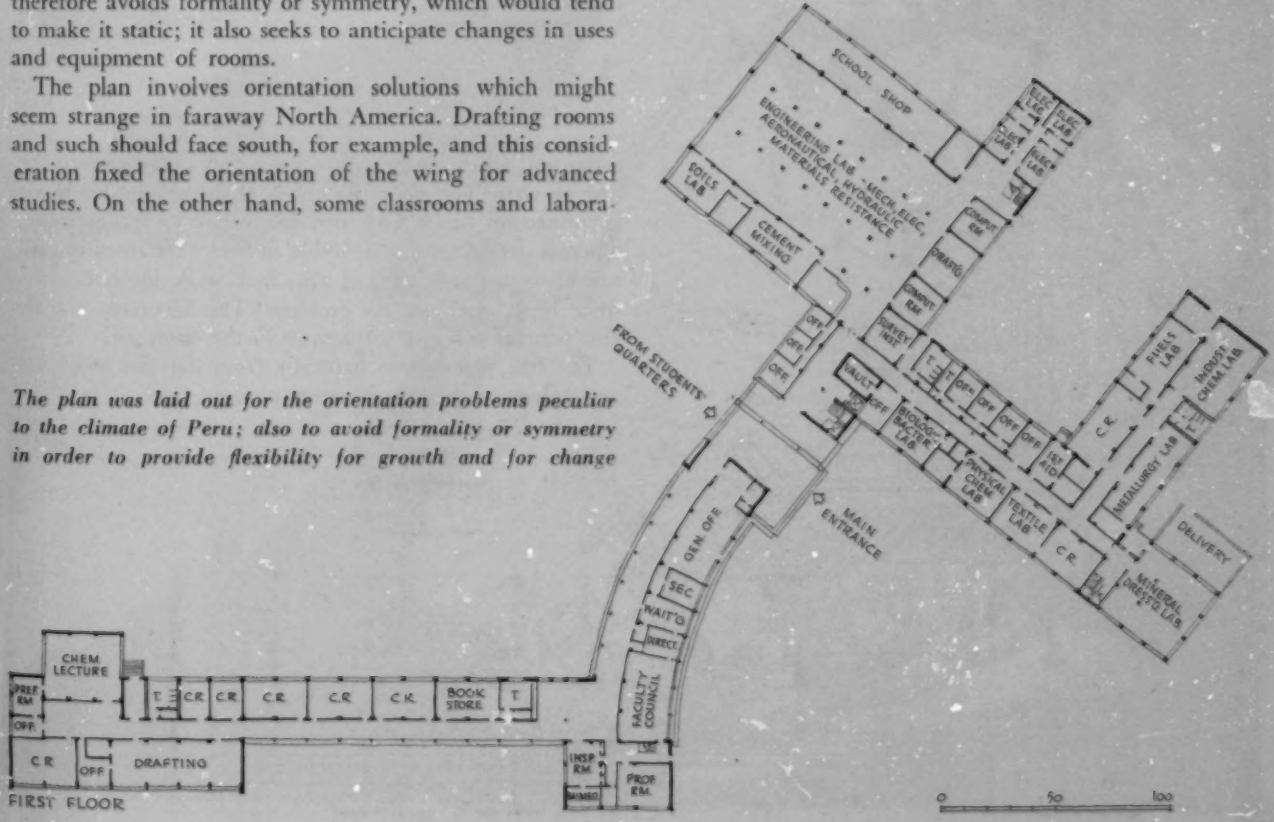
THE WORLD-WIDE BOOM in technology has brought corresponding developments in the requisite educational facilities. For example, the National School of Engineers, Lima, Peru, found its expansion needs so great that it decided to develop a new site and a completely new school plant, eventually to be complete with dormitories and recreational facilities for students. A comprehensive scheme looking toward the future was desired, even though it meant abandoning an earlier project which had progressed as far as placing foundations. This foundation is utilized in developing a functional, open plan and a logical orientation. The design itself is evidence of technical advancement. The fresh, direct, imaginative quality was also a definite and attainable objective, as is shown in the renderings.

One of the first planning considerations was flexibility. The architects considered it unlikely that any large group



of buildings such as this could be built all at one time. Thus the plan was arranged to permit construction of one building or unit after another without detracting from the efficiency or architectural effectiveness of the group. Moreover, the same technological progress that made the new school necessary could be expected to continue. The design therefore avoids formality or symmetry, which would tend to make it static; it also seeks to anticipate changes in uses and equipment of rooms.

The plan involves orientation solutions which might seem strange in faraway North America. Drafting rooms and such should face south, for example, and this consideration fixed the orientation of the wing for advanced studies. On the other hand, some classrooms and labora-

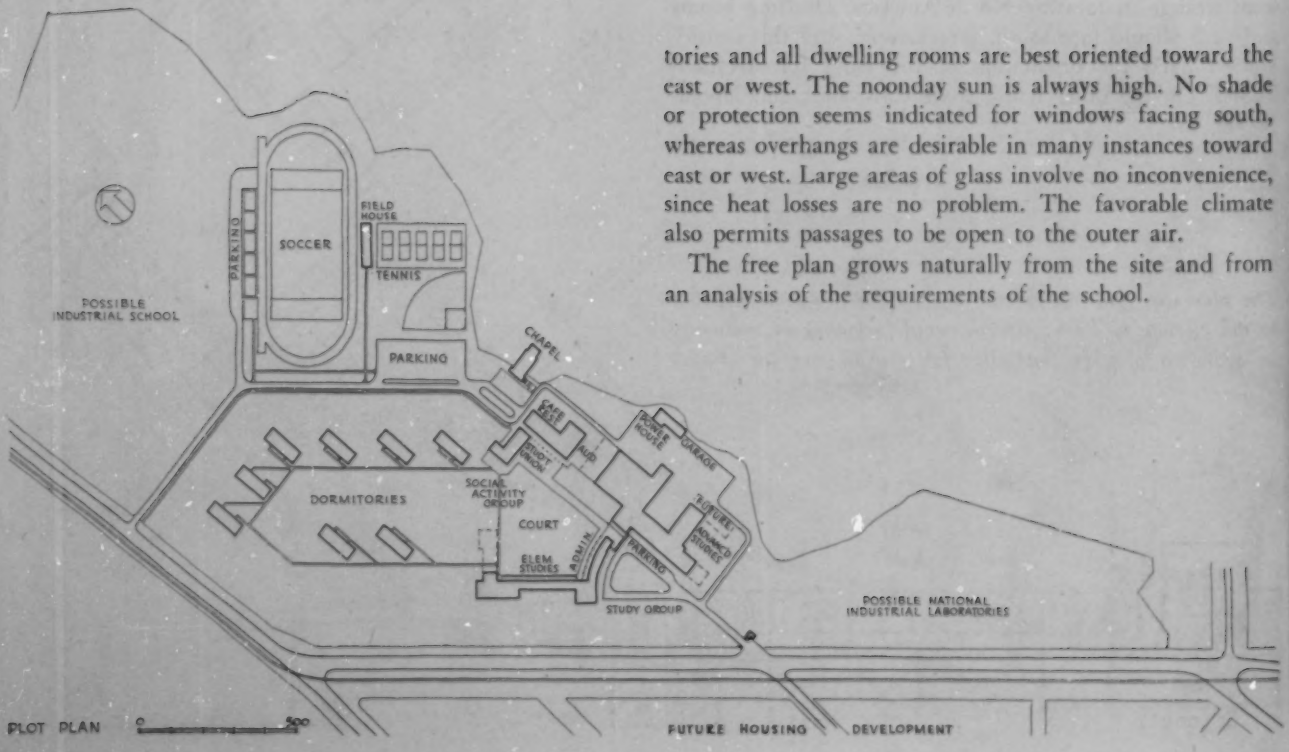


The plan was laid out for the orientation problems peculiar to the climate of Peru; also to avoid formality or symmetry in order to provide flexibility for growth and for change

Louis H. Dreyer photos

tories and all dwelling rooms are best oriented toward the east or west. The noonday sun is always high. No shade or protection seems indicated for windows facing south, whereas overhangs are desirable in many instances toward east or west. Large areas of glass involve no inconvenience, since heat losses are no problem. The favorable climate also permits passages to be open to the outer air.

The free plan grows naturally from the site and from an analysis of the requirements of the school.



MUNICIPAL BUILDINGS

Architectural Record's Building Types Study Number 91

Prepared in Collaboration with THE AMERICAN CITY

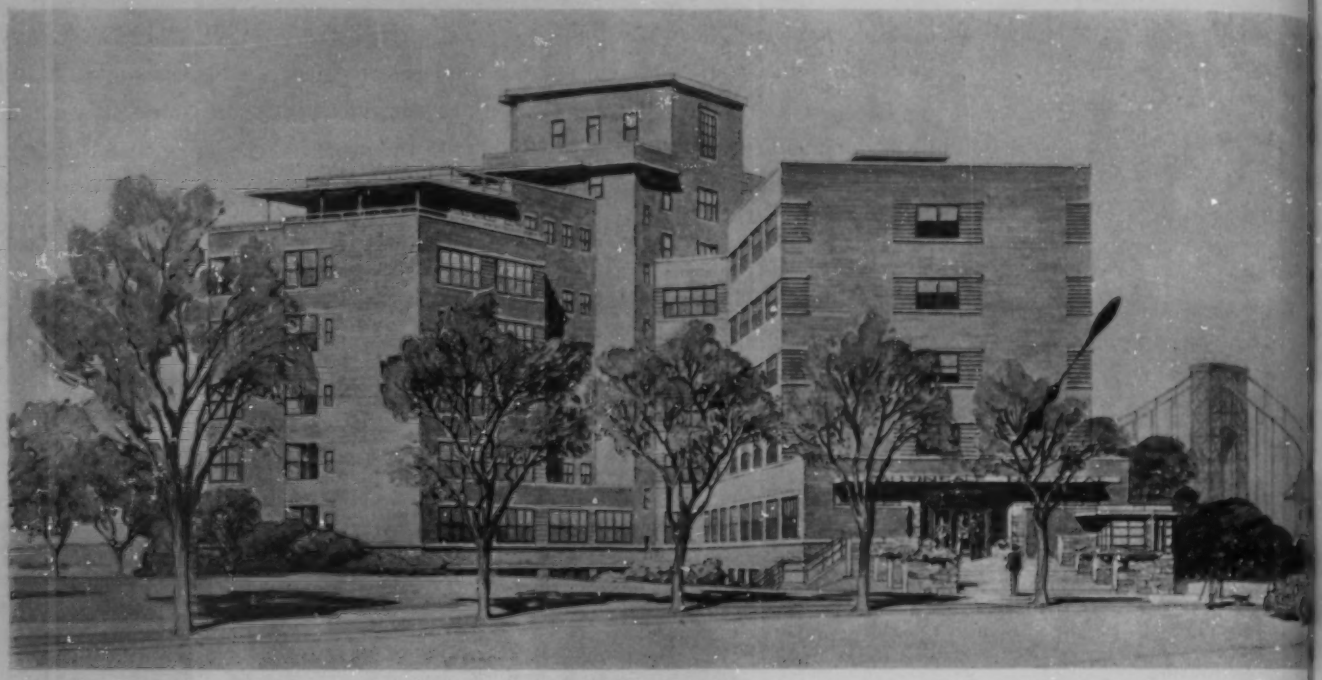
CITY GOVERNMENTS need new buildings, new streets, parks—public facilities of every kind. City officials are eloquent about needs, lists are made, and guesses totaled, and the report is considered a Postwar Plan. But some cities have coordinated the study of immediate and future needs, and how these fit the projected city growth and pattern. Too few, however, have reached the design stage, and too few of these have produced either distinctive or progressive buildings. The opportunity for better design of civic buildings is *now*.

This Building Types Study is devoted to (1) a consideration of how a realistic municipal building program can proceed, (2) an example of planning principles applied to a city hall, and (3) a collection of renderings and plans that show the kind of civic buildings now ready for actual construction.

From Post War Program, New York City Exhibit

DESIGN YOUR CITY'S BUILDINGS NOW!

*By A. Gordon Lorimer, A.I.A.**



Nightingale Hospital for New York City Department of Hospitals; New York City Bureau of Architecture

FEW WILL QUESTION the need for long-range fundamental changes in the pattern of the average sprawling city with all its medley of accidental conditions and depressed areas. Few also will question the desirability of some redistribution of industrial, shopping and residential areas into correlated neighborhood patterns wherein the citizen can both live and work in healthful surroundings. In the older and more congested cities, this is a task which will require conviction, patience, and the exercise of the energies of many civic groups and professions for its fullest achievement. That it can all be achieved and crystallized into specific planning terms by the time demobilization starts is unfortunately a practical impossibility.

It is possible, however, to segregate from the vast quantity of desired improvements before us (whether or not already incorporated in a master plan), a series of specific items not at variance with long-range objectives, which can be crystallized into a program of actual construction to be available immediately at the cessation of hostilities to absorb construction manpower if necessary during the period when civilian industries are becoming stabilized.

The creation of a substantial reservoir of completed contract documents may well make the difference between a return to the leaf-raking of the 1930's and a constructive impetus given to a basic American factor—the building industry. For example, New York City has taken positive steps in the creation of an integrated program by the appropriation of some $28,000,000 for the immediate and complete design of a $1,000,000,000 Postwar Construction Program.

What can all cities and communities do right now to realize in completed form a design program which will meet the urgent physical needs of their community, and will add most constructively to the value received from the expenditures of such funds as may be deemed necessary in the event of an employment stabilization program of public works?

One way of organizing and carrying out a community design program is based on a Capital Budget plan such as is in effect in New York. We can briefly analyze the process by which the New York Program was established.

A Five-Year Capital-Budget Program

Even in normal times, New York City maintains a continuing Capital Program of construction projected over a five-year period, the annual expenditures being determined by the amount available under the statutory debt limits of the city. As projects are completed each year and dropped from the program, new projects appear in the five-year cycle which gradually advance in priority.

While this general framework is maintained, it is not of such a cast-iron nature as to prevent the immediate advancement in any one year of projects deemed of critical nature. The five-year program is formulated through the requests of each city department for funds to cover the Capital Improvements needed by them in the discharge of their responsibilities. For example, the Fire Department

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* *Chief, Bureau of Architecture, Department of Public Works, City of New York. . . . Illustrations courtesy Department of Public Works, Irving V. A. Huie, Commissioner.*

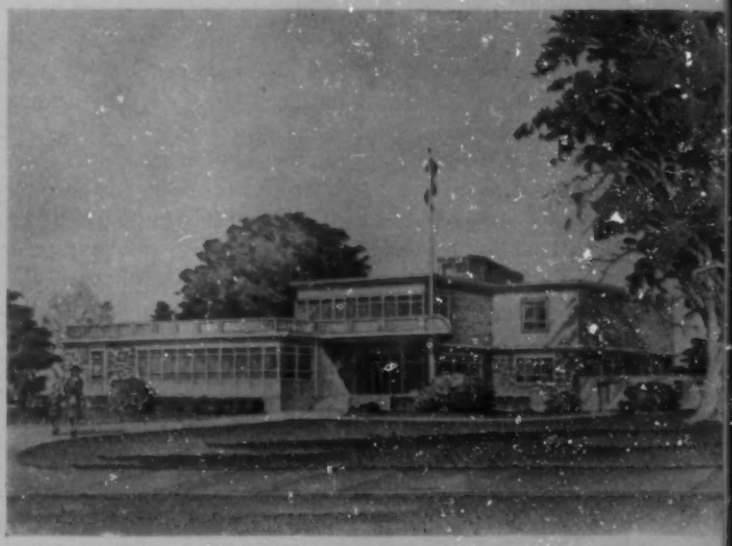
makes requests for the construction of such new fire houses as they deem necessary for the protection of the city, while the Police Department similarly requests police station houses. These requests are integrated into a comprehensive Capital Program for the entire city by the City Planning Commission, whose duty it is to determine the proper conformity of such projects to the master plan. The program progresses through a series of conferences of the departments and the City Planning Commission, followed by public hearings on the entire proposed program prior to adoption by the Board of Estimate and City Council.

Many of the projects in this program constitute orderly increments in a long-range program of facilities conforming to the master plan. For example, the entire city has been divided into health districts comprising approximately 250,000 people each. Scheduled over a period of years, the program provides for the construction of a major health center supplemented by one or two health sub-stations for each health district. Similarly, the sewage treatment program calls for regular additions of sewage treatment works to additional areas until the entire metropolitan area has been serviced.

The entry of America into World War II brought to an almost complete stoppage the execution of the normal program. Thus a constantly increasing back-log of unexecuted projects became apparent. Rather than permit a corresponding cessation of design activities, the city administration combined the design program of projects on hand, with those in the longer range five-year program to make an immediately-useful Postwar Design Program. This will put the city in a position to advance speedily or slowly according to the physical, economic, or employment needs of the postwar era—a construction program which in normal times would have spread over a period of from five to ten years.

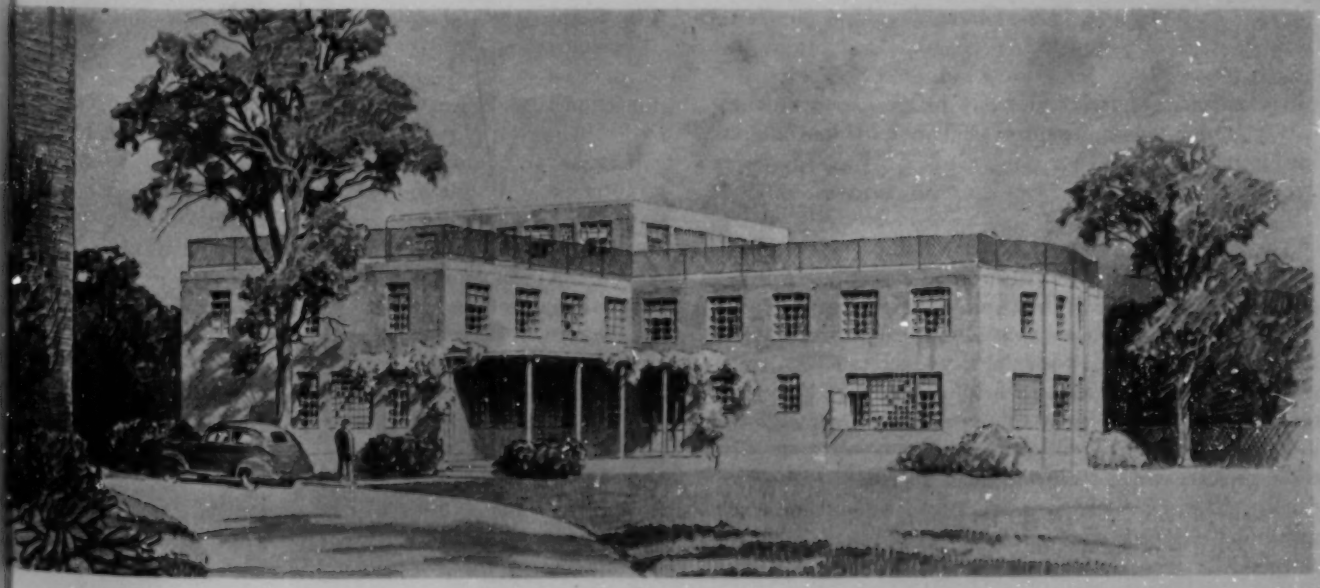
Where There is no Central Planning Body

In communities where no such program or city planning commission exists, it should still be possible to bring to a head speedily a program of the more critically required construction items. To do so, however, would require interested participation by the community at large, aided to the full by the technical and professional talent at hand. The speed and efficiency with which many communities organized themselves into capable and efficient working units for the purpose of civilian defense illustrates to some extent the power for constructive action inherent in the American community once it is aroused to common appreciation of the problem. Surely, the creation of a better postwar community for the men returning, and for their children, is as worthwhile an objective as the safeguarding of our own lives and property from war damage. Even the most conscientious and thoughtful public officials fall short



Jamaica West Health Sub-Station for New York City Department of Health; New York Department of Architecture

Staff House for Physicians, Riker's Island, New York City; Frederick L. Ackerman, Architect



of the fullest realization of the community needs because of the appalling apathy which at times surrounds their efforts in the community. An awakened community, fully participating in its own future, could not blame anyone but itself for failure to realize its objectives.

By what practical steps can the community act? The old American town meeting so fruitful of results in the early days of the Republic can still bear much fruit. To that can be added the very potent modern means of newspapers, magazines, and radio—in other words, as a first step, the promotion of active discussion and interest among all the citizens.

The result of such stimulation of community interest should be the creation of a central committee of civic leaders supplemented by the best technical talent available. The architect can play a large part at this time in the stimulation of public interest through exciting exhibits of the cities' own planning possibilities.

The second step is the creation of a working group

Harlem Welfare Center, for New York City Department of Welfare; Bureau of Architecture

Sunset Park Health Center, Brooklyn, for New York City Department of Public Works; Bureau of Architecture

(civic leaders and technical men) to act as a temporary City Planning Commission to correlate individual projects into a related whole.

Plans! Not Lists

The mere assembly of a list of desirable projects will not in itself be sufficient to insure a properly conceived program. Projects must bear an intelligent relationship to each other and to the community as a whole. The present and practical problem is to achieve an overall plan without its bogging down into an endless discussion of the "ideal city." By a concentrated study of all the proposed items, it should be possible to segregate first those projects which are determinate in nature and which can be advanced safely to immediate design without any unfortunate impact on the rest of the program. Into this category, for example, might fall basic items of community protection such as fire and police stations which are controlled by known physical characteristics such as maximum permissible transportation time from station house to any given point in the community. Similarly, where sanitation, station houses, new sewers, roads, etc., are known to be inadequate in given sections, the preparation of definite designs for them merely responds to a proven need. These may well be gotten under way and become completed contract documents, ready for execution when men and material are available.

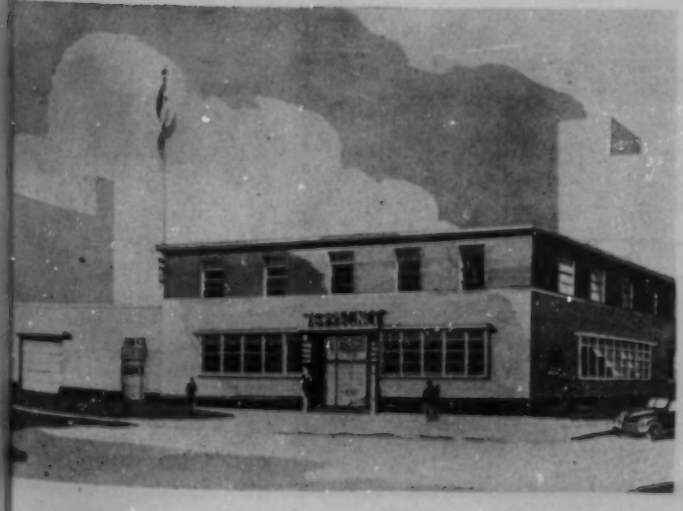
Concurrently with the design of the first category of project, there should be studies of projects requiring statistical analysis and surveys relating to population needs and existing or complementary facilities. In this category may fall hospitals, health centers, schools, etc. Even here, however, portions of the program may be safely and speedily determinable. In many sections of the country,

Proposed Vernon Avenue Bridge and Viaduct; New York City Bureau of Bridges

for example, the existing general hospitals provide far below the accepted minimums of 3.5 to 4.5 beds per thousand of population. So long as a proper focus of transportation is maintained, it is fairly safe to progress some distance toward the optimum coverage so long as the design work is assigned to a competent architect and an experienced hospital consultant. Our experience has shown that actual progress of certain of these items clarifies issues relating to the more doubtful items.

Similarly, broad programs of sewage treatment for the correction of evils caused by the thoughtless and unplanned exploitation of waterways, etc., should be susceptible to an integrated long-range solution which will nevertheless permit an immediate attack on the more critical areas. By establishing a master plan of broadly determined drainage areas, it should be possible to execute corrective treatment steps immediately for the more critical polluted districts, leaving those areas of lesser or slowly growing population for later execution in the progressive program.

Seventy-sixth Precinct Police Station, for New York City Police Department; postwar design by Bureau of Architecture



Long-range Redevelopment

Along with the progress of the first two categories, constant attention should be given to the formulation of a broader framework within which major rebirth and reintegration of decayed areas may be achieved. Here architects might well assert the initiative for which their training and background has fitted them, and bring forward well matured and feasible proposals toward this end—proposals which could be visualized and grasped by the layman.

Too many professional men have fallen into the habit of waiting behind their shingles for specific assignments to come to them, while a wealth of opportunity for community benefit surrounds them, waiting only for someone to show the way. Architectural competitions, sponsored by commercial groups, for what is in total an extremely modest sum, have produced bursts of energy and concentration on the part of the profession far exceeding the worth of the limited objective set forth. It may be that some form of competition toward the bettering of the community is a way of stimulating such effort. Regardless of the means by which it is achieved, it is time that the architectural profession became in fact the natural leader in the creation of all those amenities of life which every free American should enjoy in his city.

To sum up:

1. A community can, where proper interest plus initiative exists, create for itself a constructive program for progressive postwar betterment.

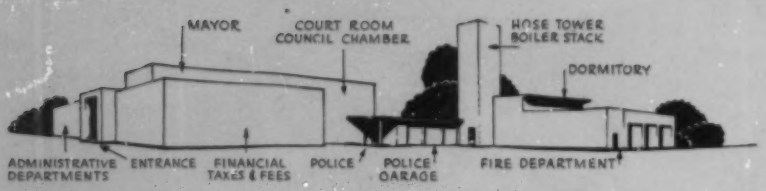
2. To do so requires the establishment of a central planning group or commission whether voluntary or paid.

3. The planning body can, with reasonable certainty, quickly segregate those projects capable of immediate design or construction, and can create the framework of study whereby the less determinate projects can be brought into proper focus for execution.

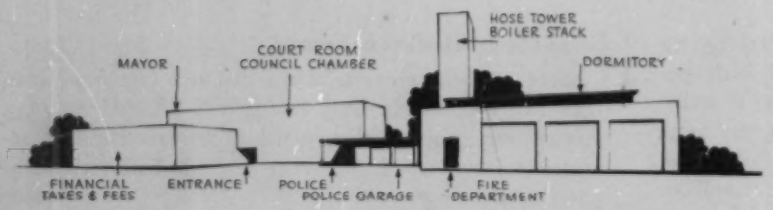
4. The present crisis forms a challenge to each city and community which should not be ignored, for, in the aggregate, the attitude of each and every community determines the pattern of postwar America.

CITY HALL FOR A GROWING COMMUNITY

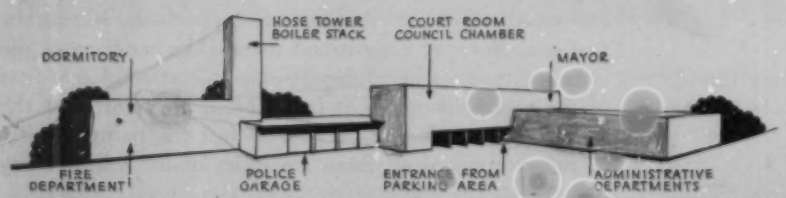
Plans and description on following pages



Perspective showing the main entrance front (at the left) and the police department with its garage forming a connecting link between the administrative areas and the fire department at the extreme right. (See key drawing above)

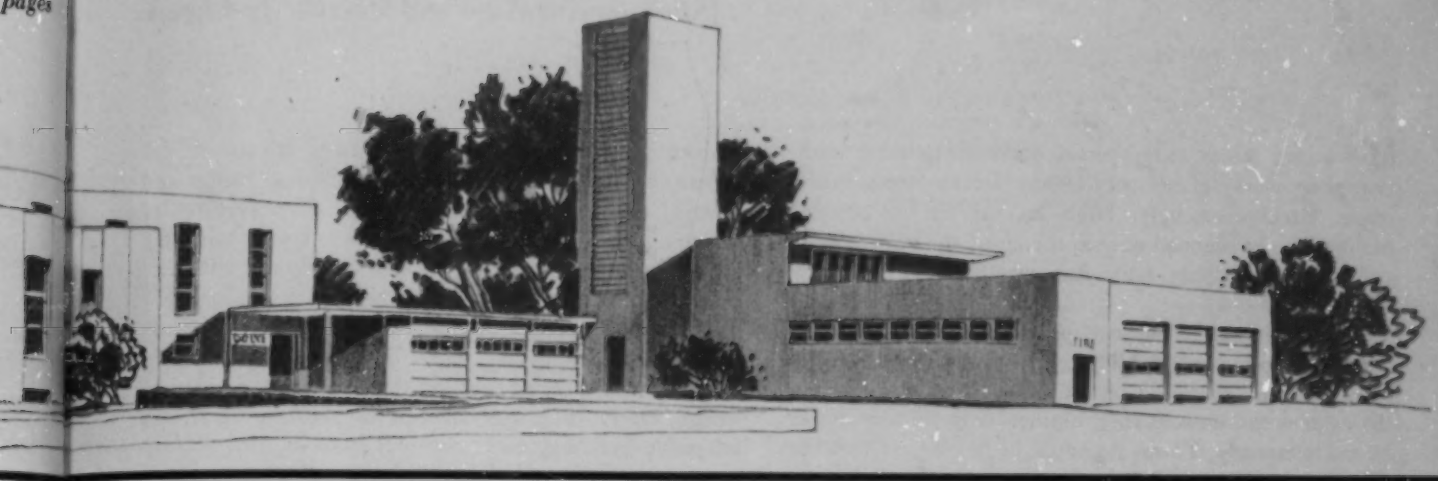


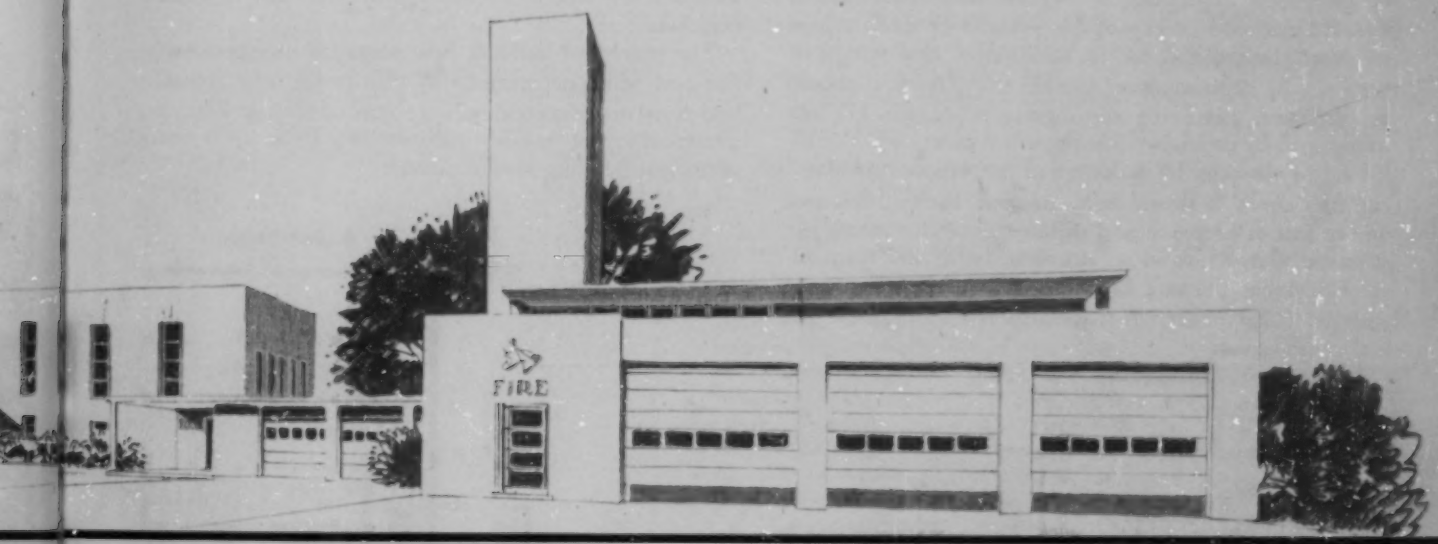
View along the side street showing the financial and tax department (left), the courtroom and council chamber, and, in the right foreground, the fire station with its dormitory above and the combined hose tower and boiler stack

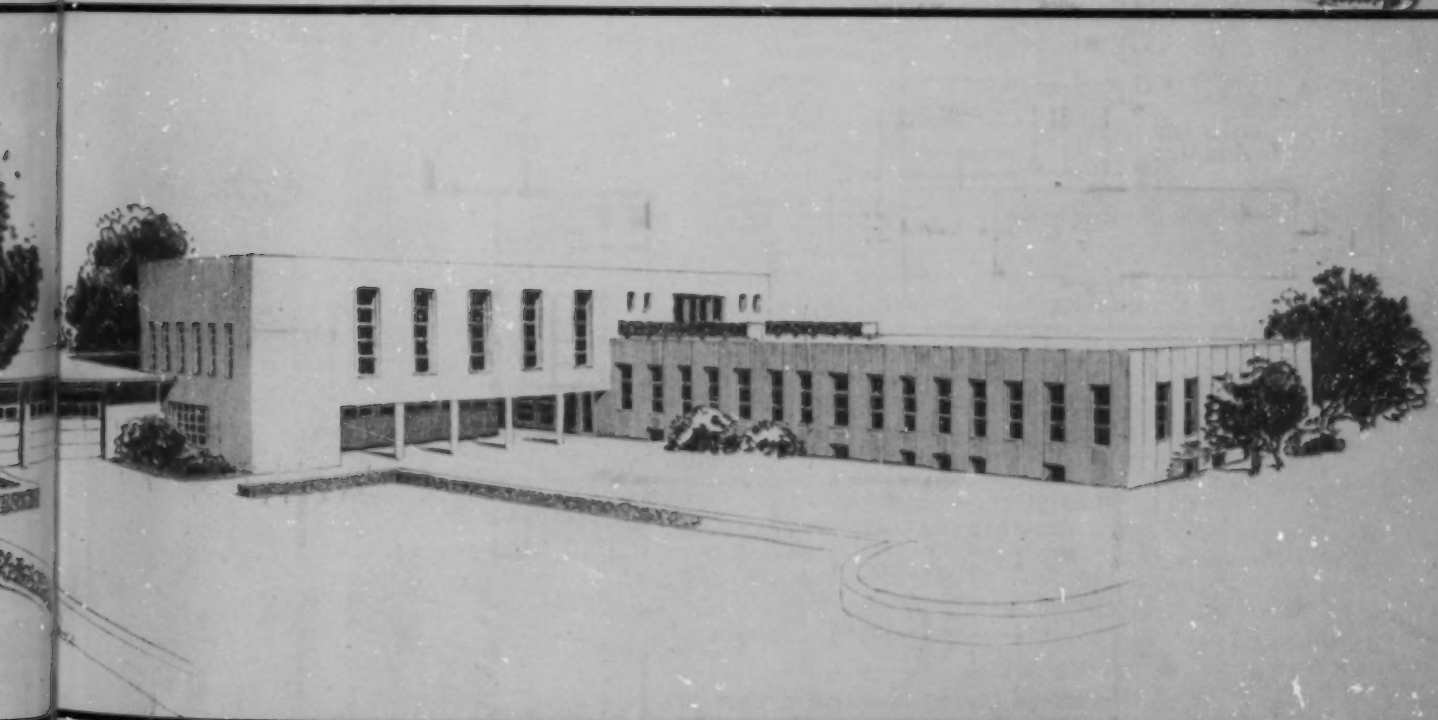


Perspective of the building from the rear parking area, showing, from left to right, the fire department, police department garage, the courtroom and the council chamber above the police department and, at the extreme right, the administrative departments

Skidmore, Owings and Merrill, Architects







CITY HALL FOR A GROWING COMMUNITY

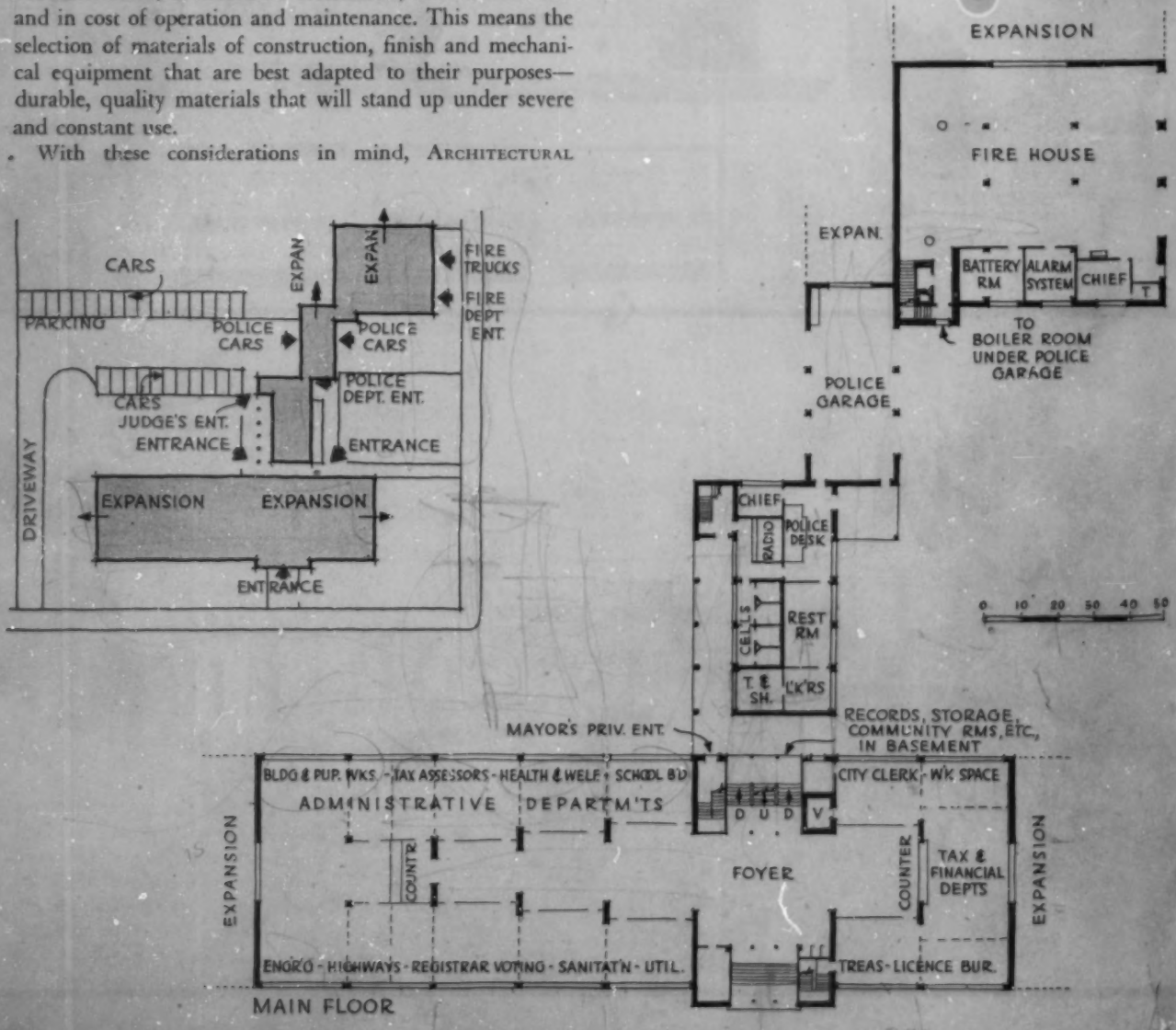
Skidmore, Owings and Merrill, Architects

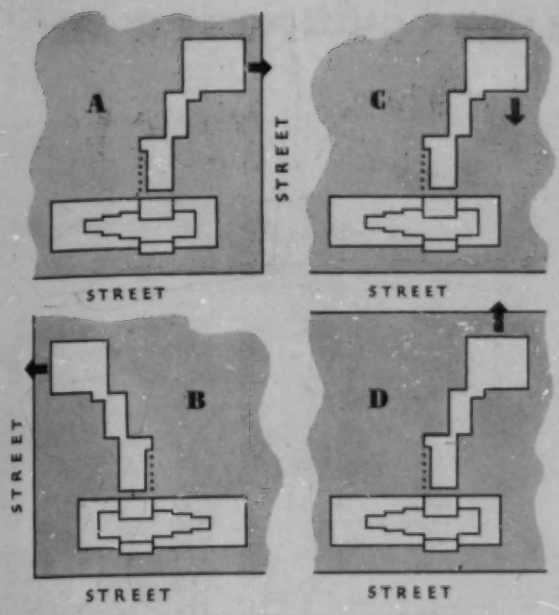
MANY CITY HALLS today possess more sentimental tradition than working efficiency. Many are cramped, inadequate, dark—even ugly. High on the list of postwar buildings to be planned now is, therefore, the new municipal building or city hall. But what should this new building be?

First, it should be efficient, providing the best possible working conditions for all the city departments it is to house. *Second,* it should be convenient for the public, so the citizens can transact their business with the city quickly and pleasantly. *Third,* it should be flexible—so that the office areas desired can be arranged to suit each department's working needs, easily partitioned and easily changed to meet new conditions or organization requirements. *Fourth,* it should be expandable—should be easily added to either horizontally, by the addition of new wings, or vertically by superimposing another story. *Fifth,* it should be attractive, expressing the dignity of its use but not stereotyped by useless stylistic ornamentation; rather establishing its character by its form and proportions and clean-cut lines. *Sixth,* it should be economical, both in first cost and in cost of operation and maintenance. This means the selection of materials of construction, finish and mechanical equipment that are best adapted to their purposes—durable, quality materials that will stand up under severe and constant use.

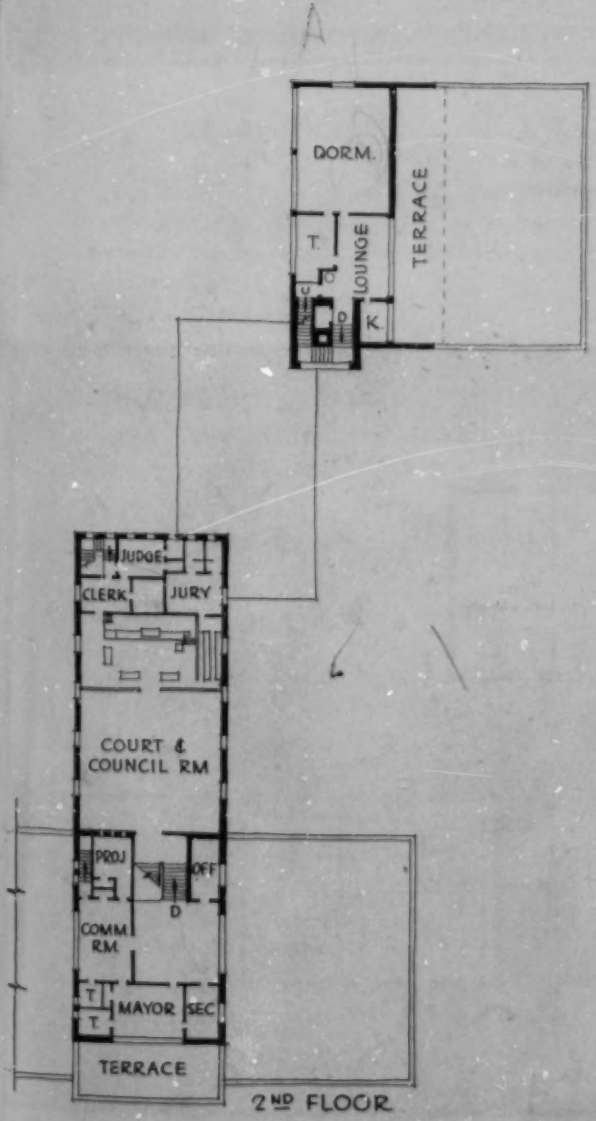
With these considerations in mind, ARCHITECTURAL RECORD and *American City* enlisted the services of the experienced architectural firm of Skidmore, Owings and Merrill, of New York and Chicago. This problem of designing a municipal building for a typical growing, progressive American city of, say, twenty-five or thirty thousand population was given them to solve, and they produced the effective and stimulating results shown on these and the following pages. Their drawings illustrate the practical carrying out of the principles of efficient design rather than any attempt to show a universally adaptable building. Each city will have its own requirements and consequent controlling factors in design—but the approach to the problems and the possible practical solutions are well illustrated in the architects' schematic sketches.

The municipal building here presented incorporates the fire and police departments as well as the administrative and legislative functions of city government. It illustrates graphically the major qualities which every modern municipal building should possess.





A (above) shows the city hall on a corner lot as indicated in the developed plan. *B* shows the building reversed to fit an opposite corner lot. *C* shows the building on a lot with street on one side only. *D* shows how the building would fit a lot with parallel streets on opposite sides. Fire house doors would open in direction of arrow in each case.



THE MUNICIPAL BUILDING is divided into five basic areas, departments or functional units: Executive (Mayor or City Manager), Administrative, Tax and Financial, Police (with courtroom, etc.) and Fire.

Although each is an integrated part of the scheme, well related to the others, each of these is concentrated in a separate area and each can be operated more or less independently. The diagrams (right) indicate various features of the plan (shown at large scale on opposite page.)

1. The public *lobby* is the heart of the plan. There are none of the usual long corridors and stairs are cut to an efficient minimum. The administrative, financial, legal and other departments surround the lobby and are clearly visible as people enter the building.

2. The *administrative* area in the left wing can be divided into such offices and working areas as are required by particular city departments. This area can be expanded, as shown by the dotted lines (page opposite).

3. The *tax and financial* area is in the right wing. All bills, fees, taxes, etc., can be taken care of in this area. Expansion can be as indicated.

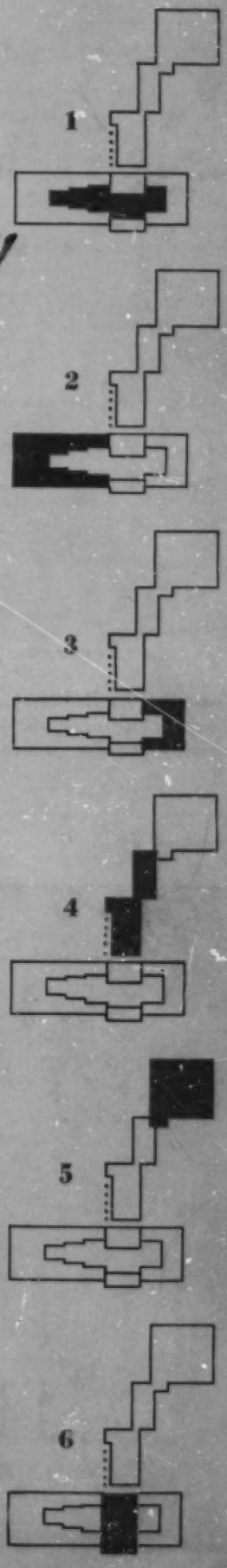
4. The *police department* is in a separate wing where it can function 24 hours a day, independent of the other departments. It is directly connected with the court facilities on the floor above. A private entrance is provided for the judge. The court room can also function as the council chamber or can be used for general community meetings (a projection room is provided). An additional court room can be built over the one shown, should such expansion be necessary.

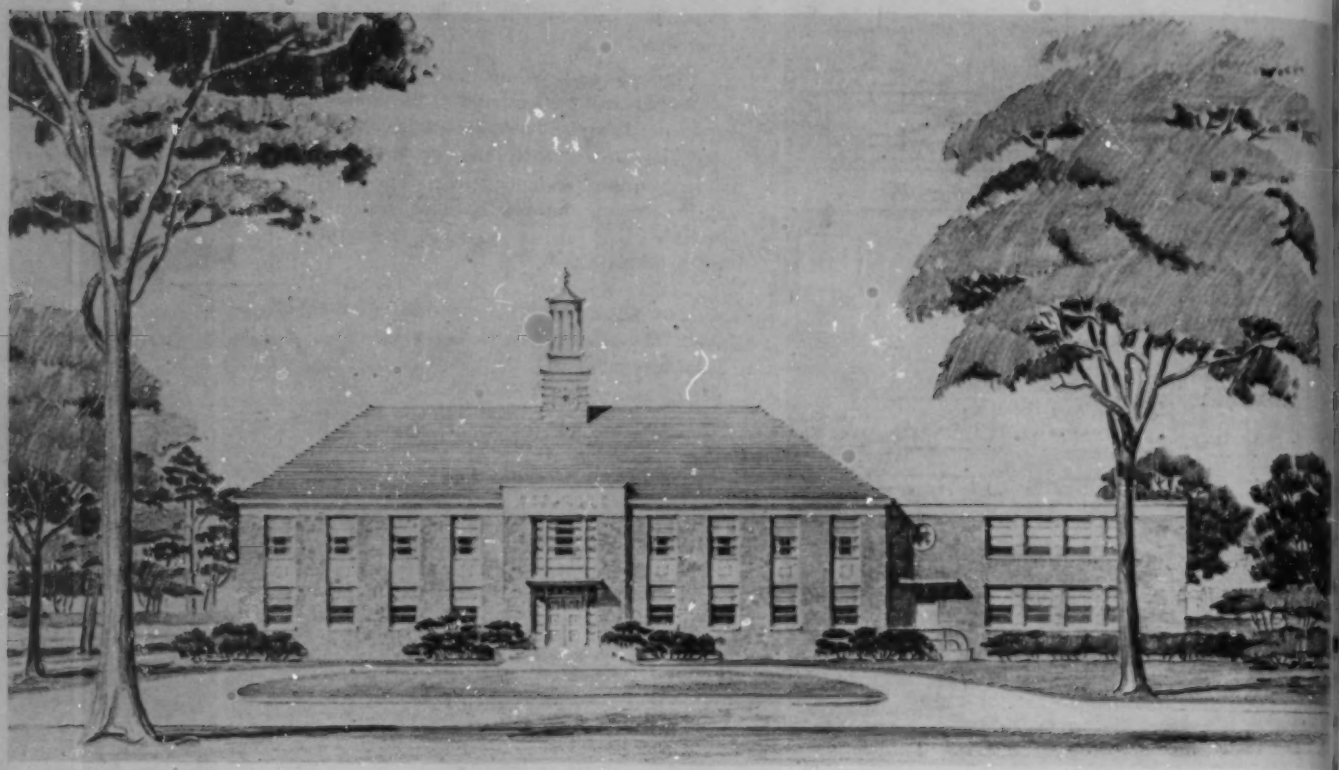
5. The *fire department* is also in a separate wing and also functions 24 hours a day independent of other departments. Expansion can be as indicated on the plan. Dormitories and recreation space for the firemen are provided on the second floor. The boiler flue is incorporated in the hose-drying tower.

6. The *executive department* (mayor or city manager) is on the second floor. A private entrance is provided for the mayor. The roofs adjacent to the mayor's office could be developed into roof gardens, and there is also an ideal front terrace for an official reviewing stand.

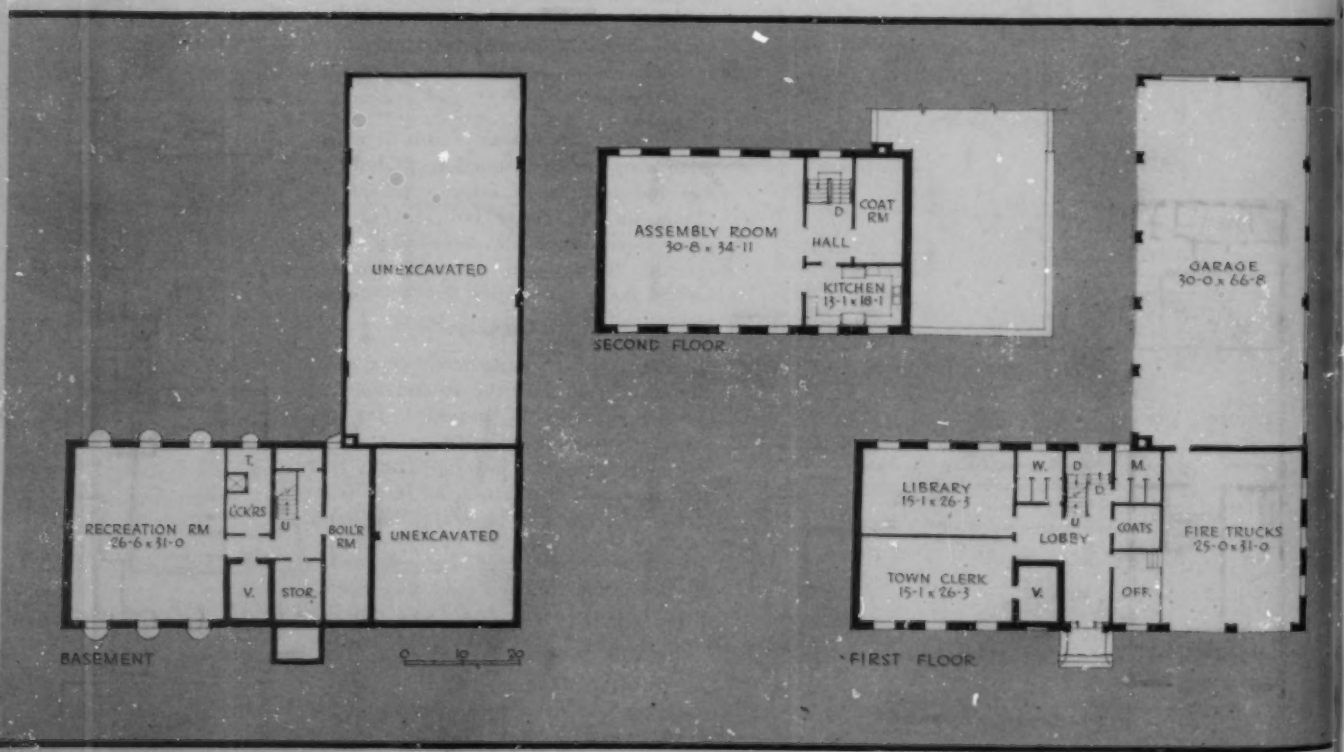
The *basement* is used for community meeting rooms (Red Cross, Boy Scouts, etc.), toilets, record vaults and building services.

As shown in diagrams A, B, C, D, the building can fit a site with any street conditions.

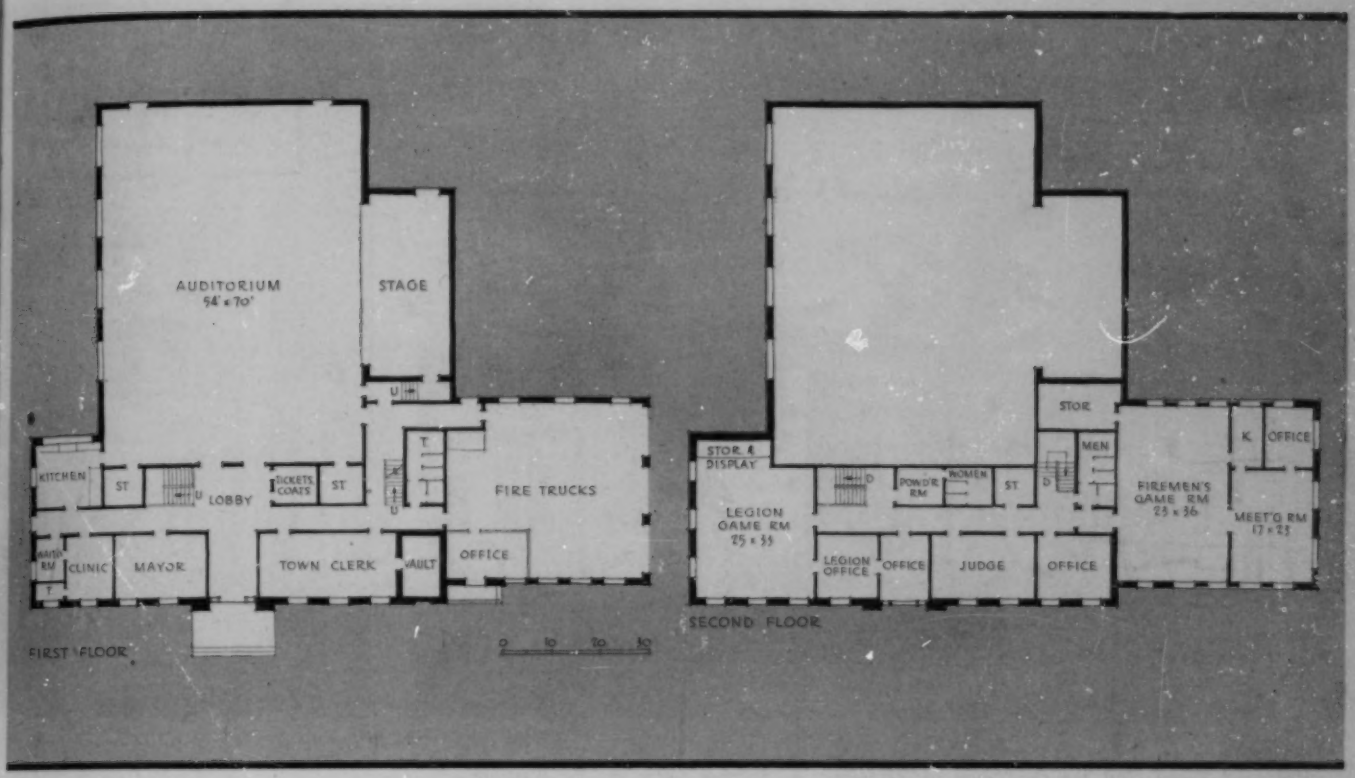




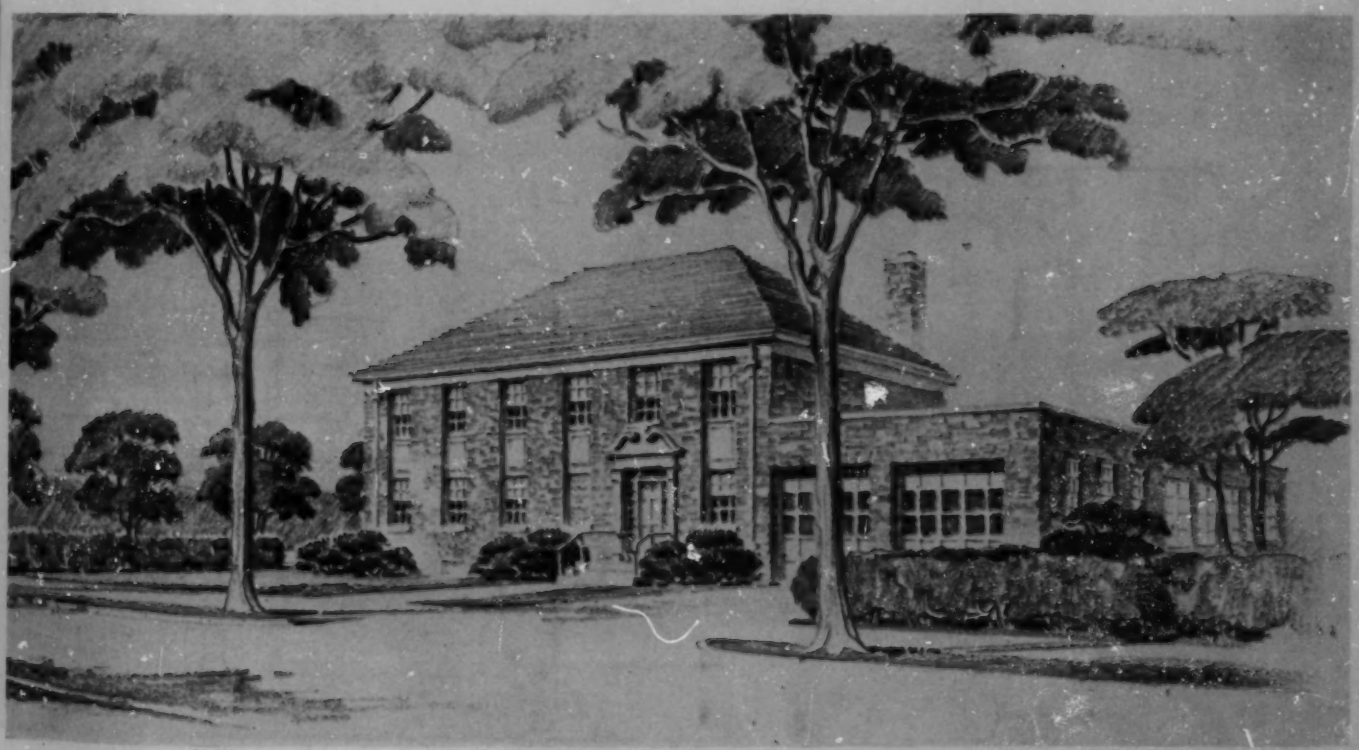
Town Hall for Red Hook, N. Y., Rolf C. Dreyer, architect; C. Dale Badgeley, delineator. This town hall has been designed to care for all official activities of a township, including administration, fire department and American Legion quarters



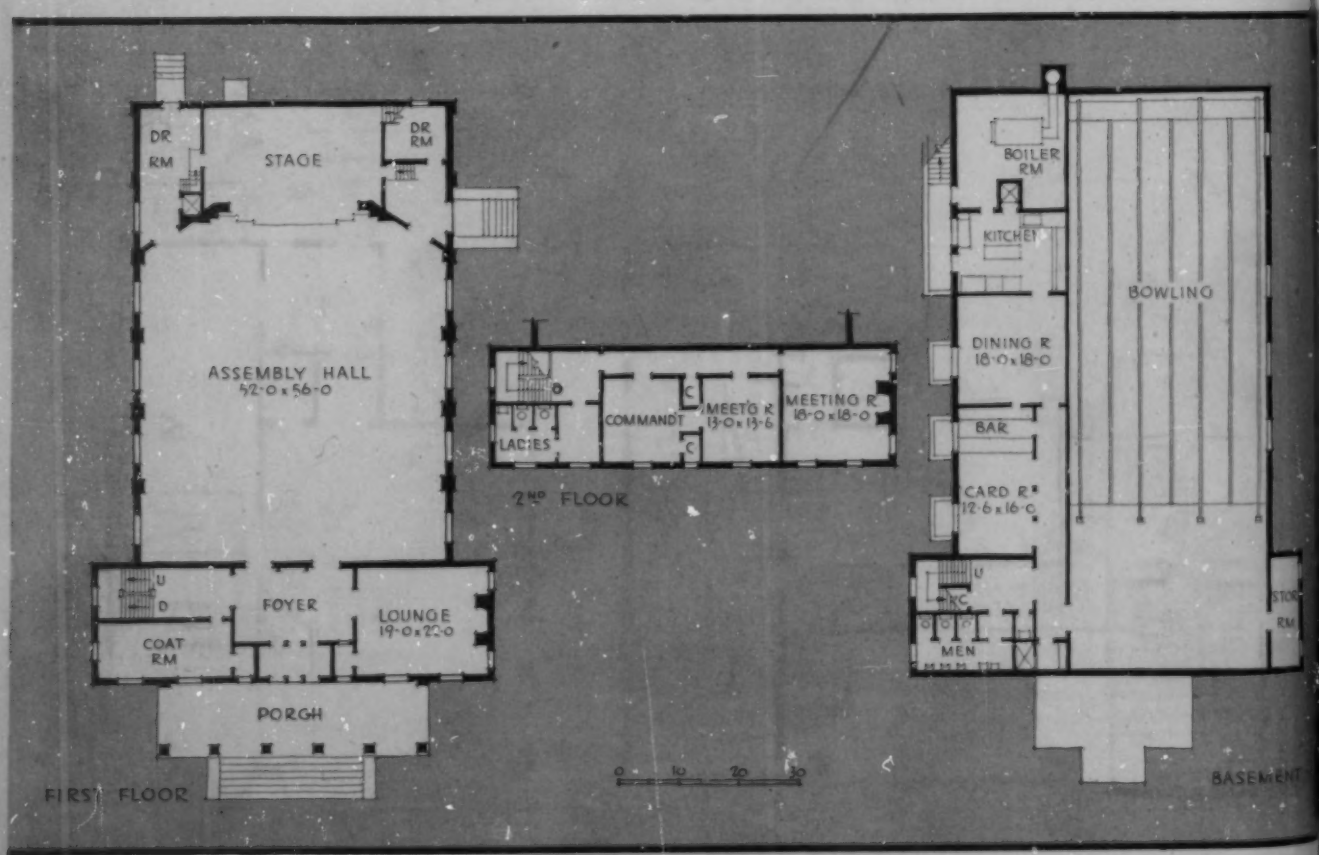
TOWN HALLS FOR SMALL COMMUNITIES



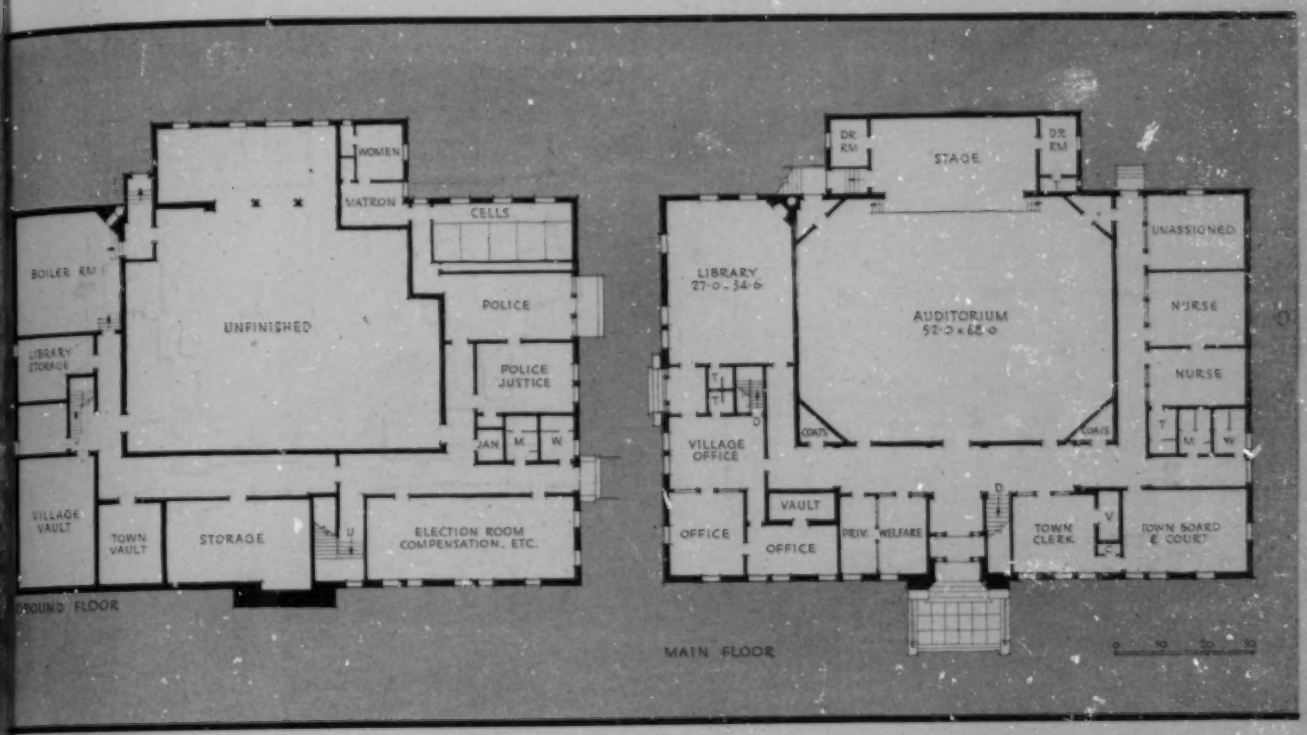
Town Hall for Pine Plains, N. Y., Rolf C. Dreyer, architect. For a township of 1300 population, this one embodies the minimum requirements of a rural community: administration, assembly, firehouse, garage. Plans on opposite page



Proposed Town Hall for the Town of Altamont, at Tupper Lake, N. Y., William G. Distin, architect. With the project approved by the State Postwar Public Works Planning Board, final drawings and specifications are now being prepared



TOWN HALL—MEMORIAL HALL

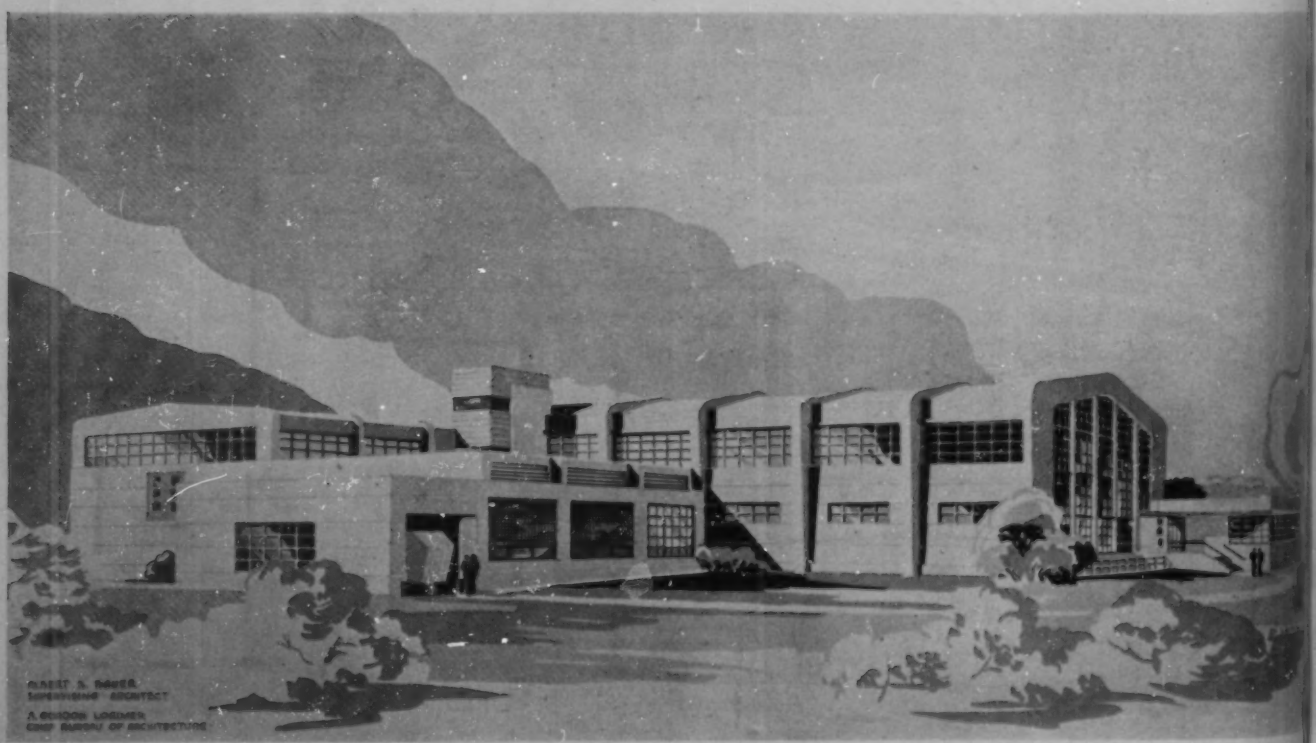


One of the towns to be ready with plans for a war memorial is Hamden, Conn., and it will be a useful memorial, a community building with recreational facilities. American Legion Memorial Building, Westcott & Mapes, Inc., architects and engineers

MUNICIPAL BUILDINGS—POSTWAR

Torresdale Pumping Station for City of Philadelphia; M. W. Bieberbach, architect

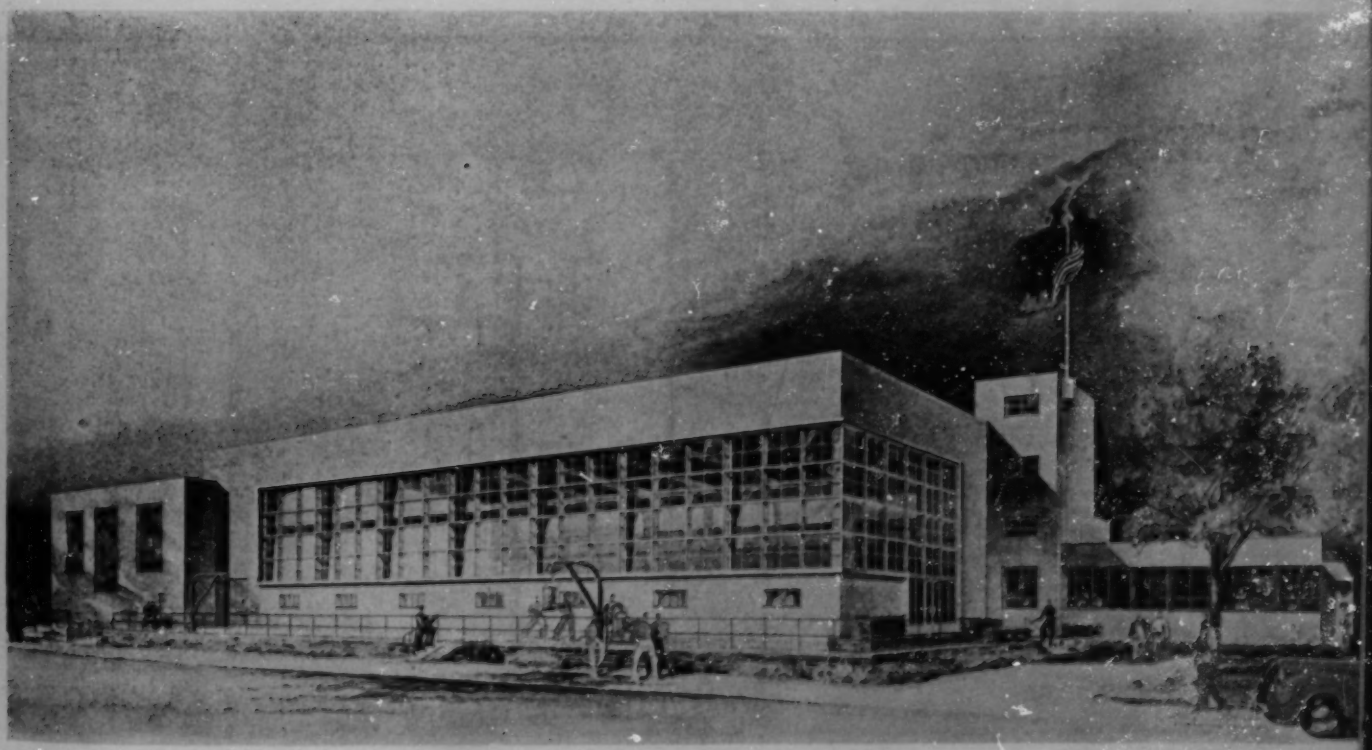
Newton Creek Sewage Treatment Works, New York City; Bureau of Architecture

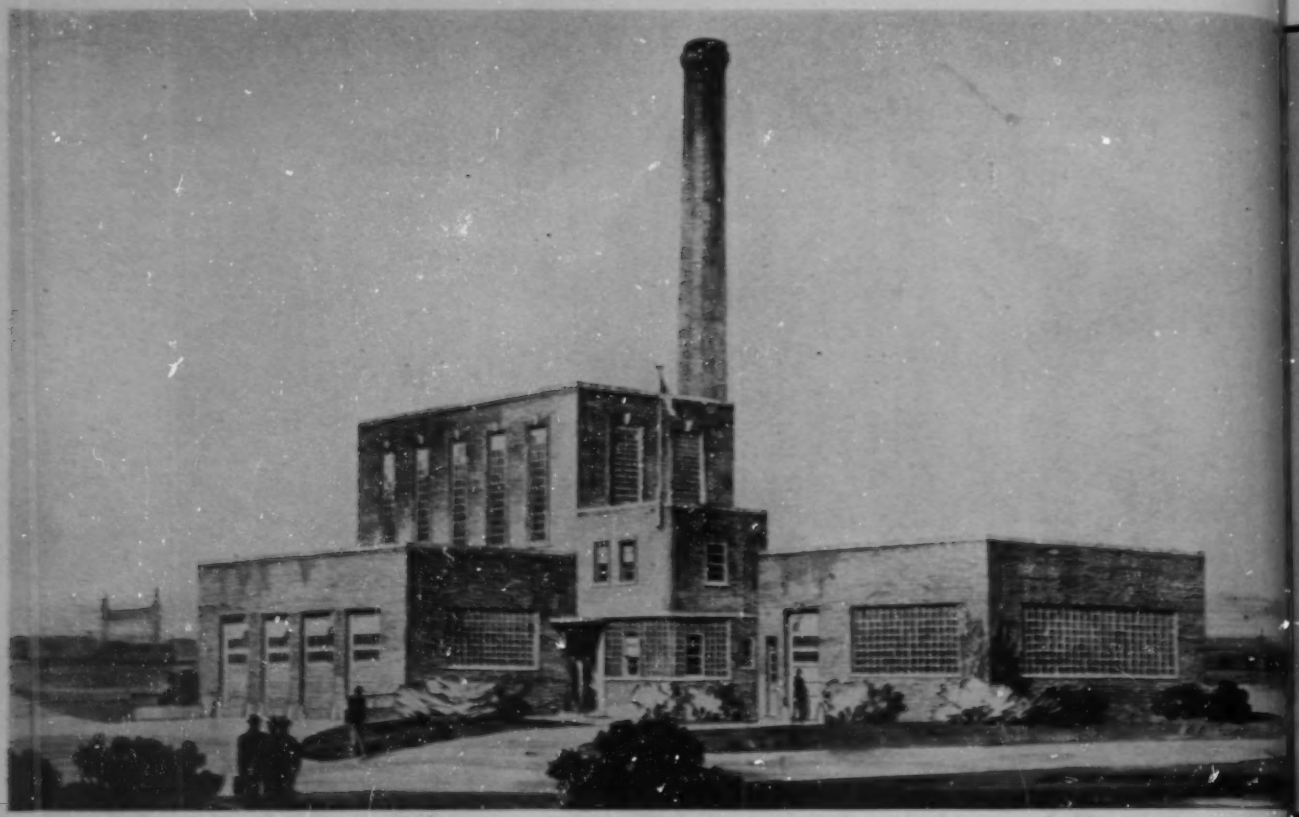


WATER WORKS—SEWAGE TREATMENT

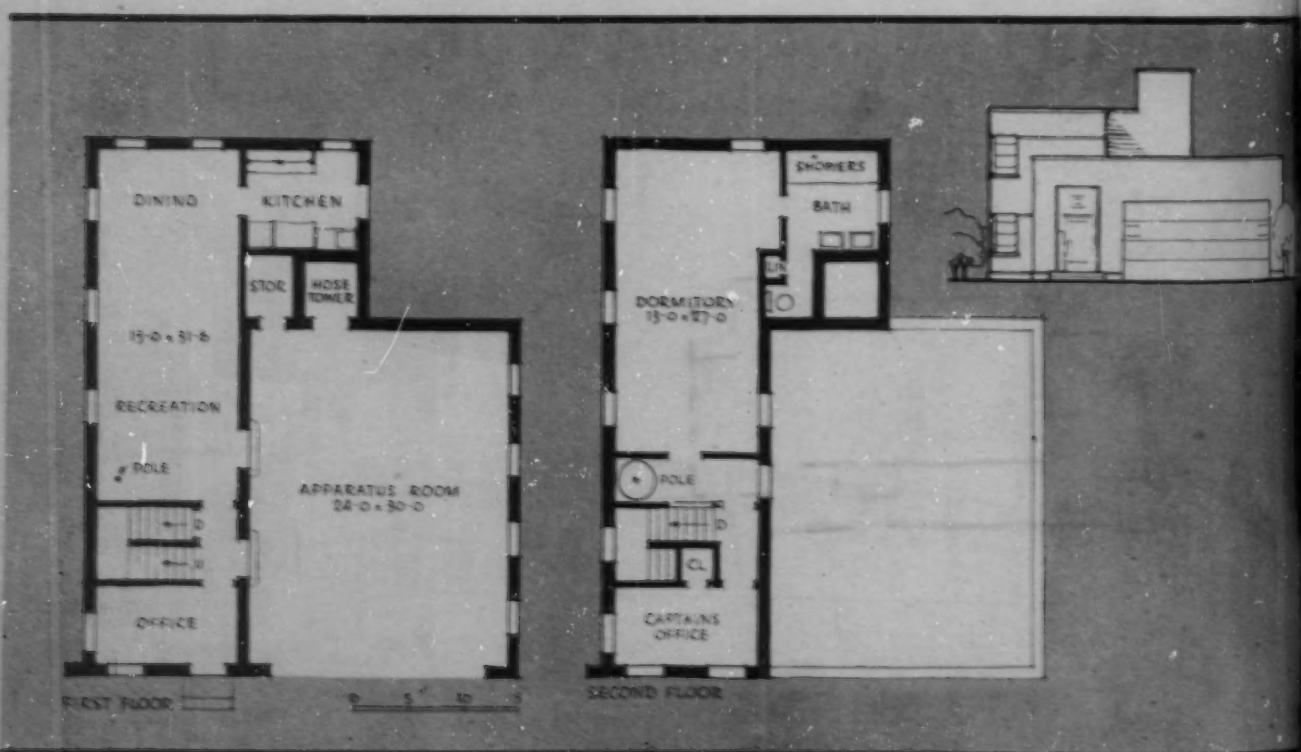
Administration Building, Philadelphia Water Works Improvement; M. W. Bieberbach, architect

Twenty-Sixth Ward Sewage Treatment Works, New York City; Bureau of Architecture

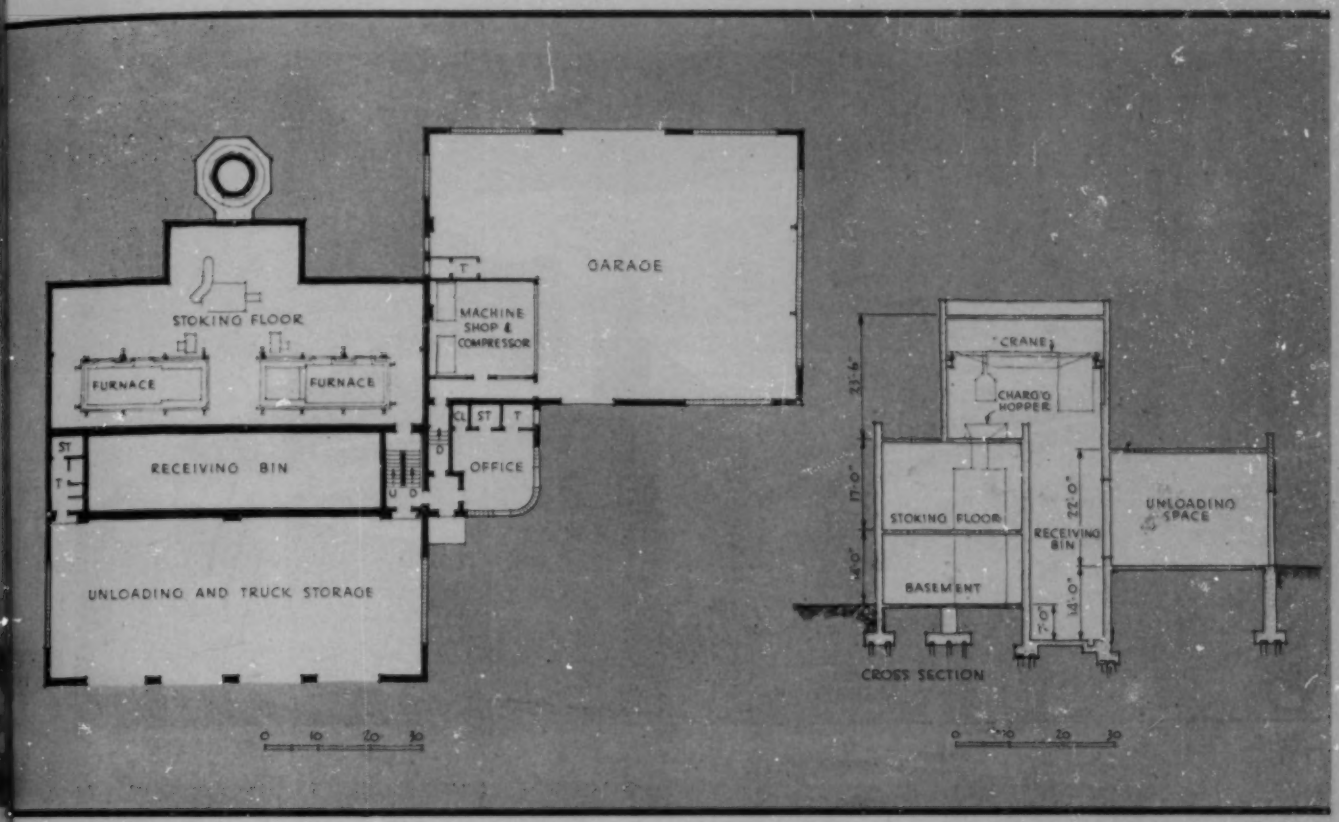




Within the category of municipal buildings is the incinerator plant, a frequently very necessary facility which the town must build as soon as possible after the war. Here is the Proposed Plant for Hamden, Connecticut; Westcott & Mapes, Inc., architects



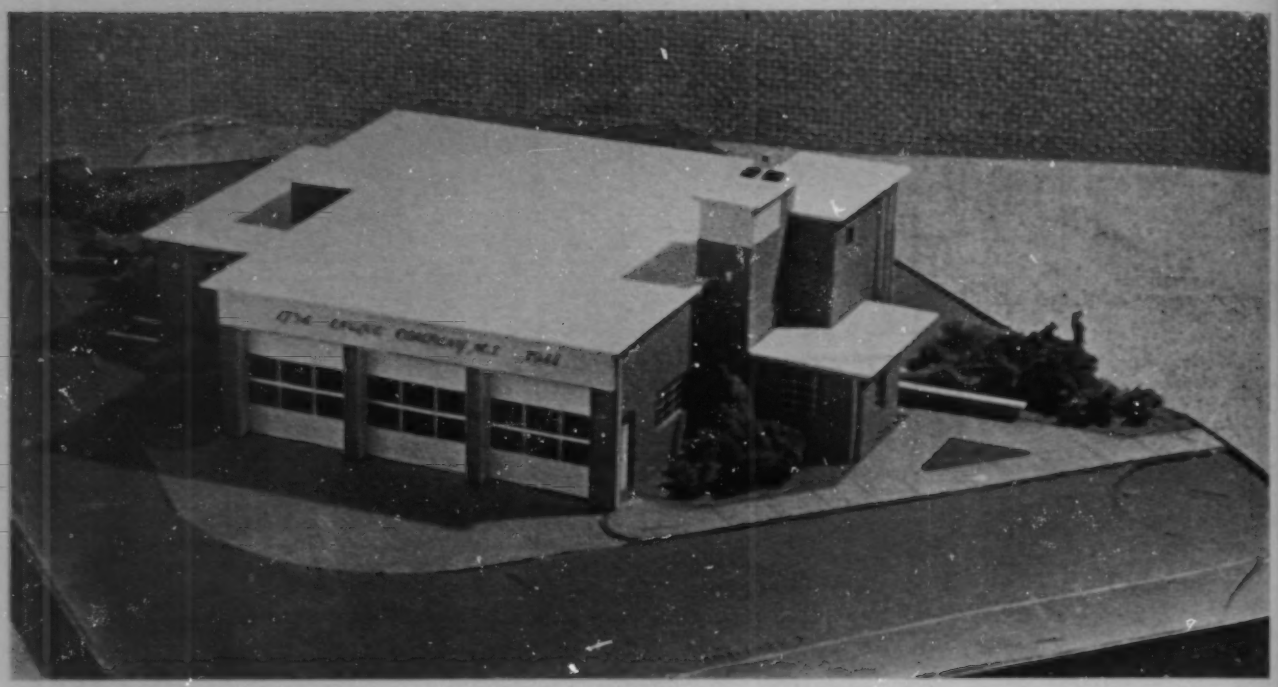
INCINERATOR PLANT—FIRE HOUSE

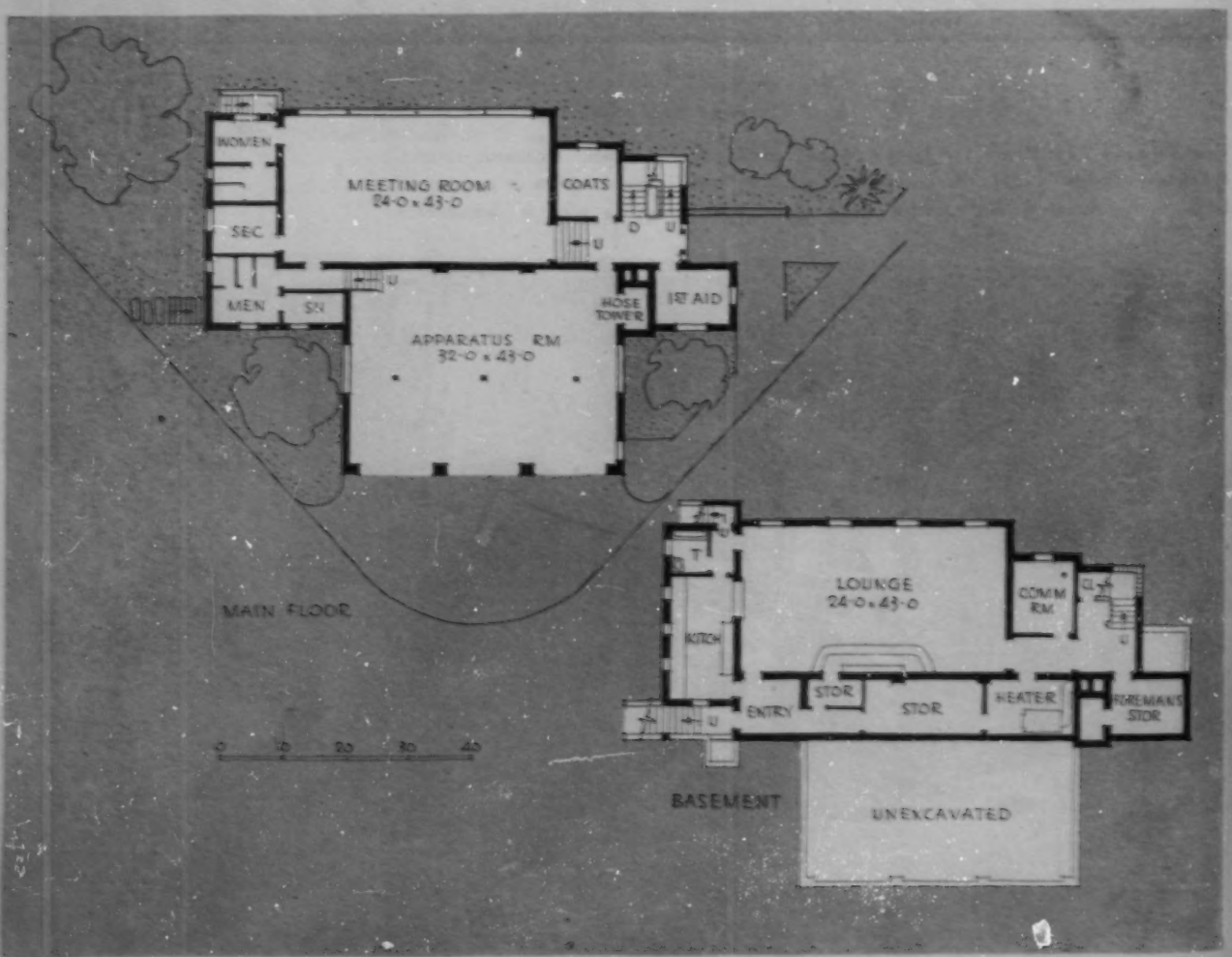


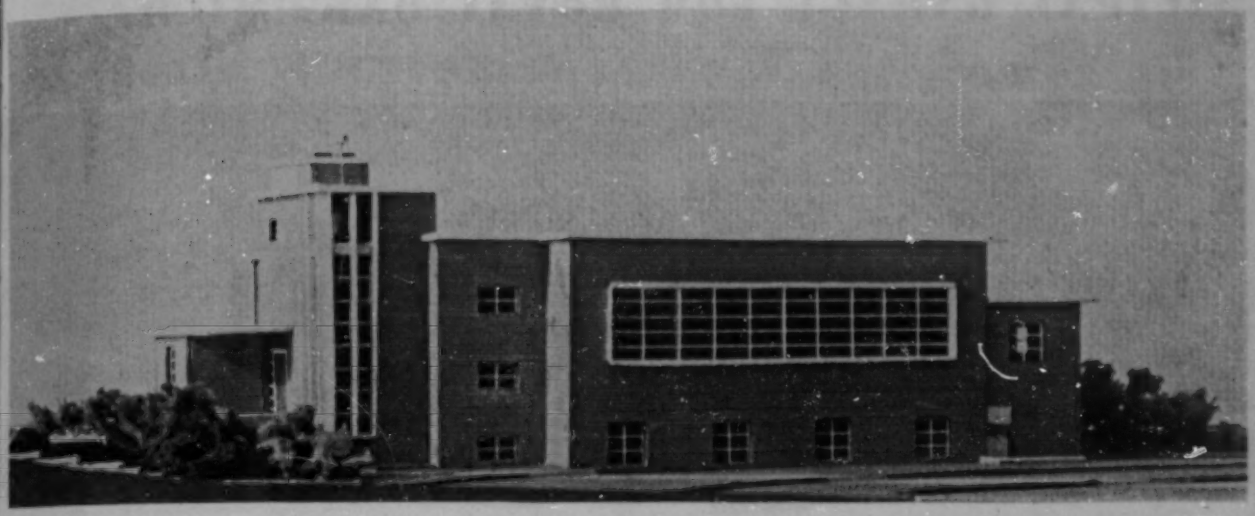
Neighborhood Fire House for Grand Rapids, Mich.; Roger Allen, Architect. It is designed to house an all-purpose apparatus called a "quad," which serves as pumper, hose truck, chemical and ladder truck combined. There is also a basement

FIRE HOUSE FOR PRINCETON, NEW JERSEY

Sherley W. Morgan, Architect; Henry A. Jandl, Associate







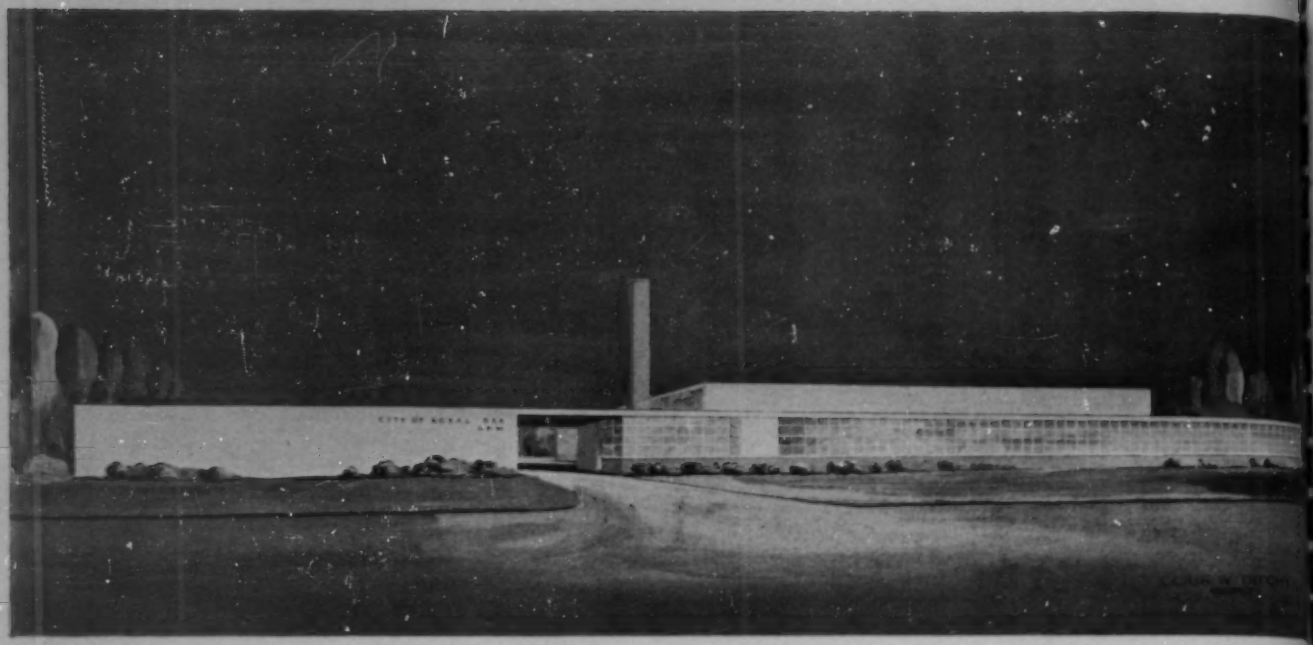
Designed to be ready for postwar construction, this fire house is but one project of a number included in Princeton's whole planning program. The Community Development Council is placing Princeton in the vanguard of smaller cities that are really prepared to go ahead. See plan and photo of model opposite

WEST ROXBURY FIRE STATION, BOSTON

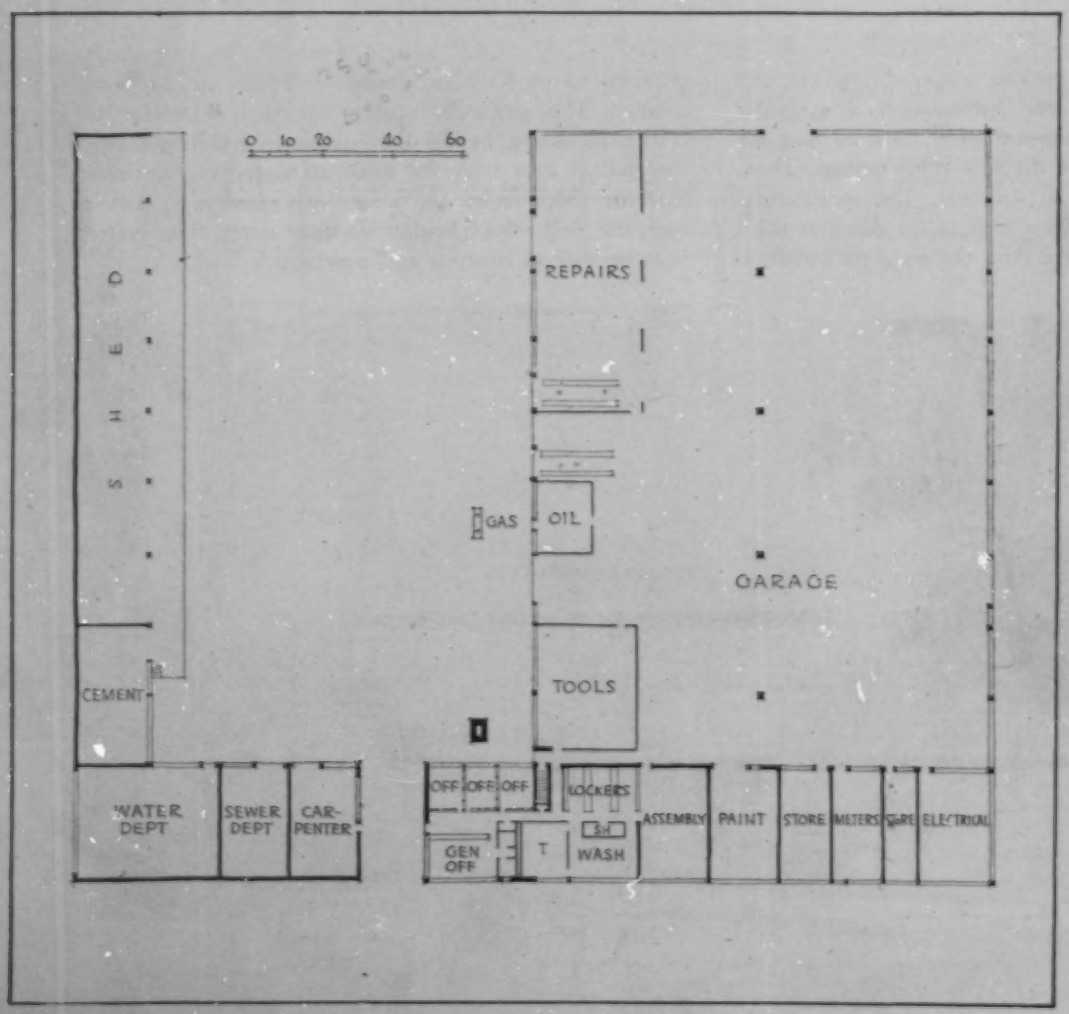
George Ernest Robinson, Architect

Almost every fire station presents a special problem, but most of them, points out Mr. Robinson, have a similar budget problem. The equipment of the station and the allotment of space must be the first consideration. Then, of course, comes strength of structure. The architectural part must of necessity come at least as far down as third in the budget considerations. Also the architect usually is required to conform to styling traditions in the community. This particular station has fairly extensive facilities, including, besides the equipment room: a dormitory for 14 men with the usual accompanying facilities; machine shop, boiler room, and storage spaces; also a complete drill school, with a six-story tower. The project is to be built of concrete and waterstruck brick.

MUNICIPAL GARAGE FOR ROYAL OAK, MICH.



Postwar design, by Clair W. Ditchy, architect, for a garage to house also offices, repair shops and storage. The building is so planned and so placed that each of the four space categories can be expanded independently to accommodate growth



ACOUSTICAL PLANNING FOR THE MOTION PICTURE THEATER AUDITORIUM*

TIME-SAVER STANDARDS
JULY 1944

**Abstract of an article in the Journal of the Society of Motion Picture Engineers, entitled "Coordinating Acoustics and Architecture in the Design of the Motion Picture Theater," by C. C. Potwin and B. Schlanger.*

Motion picture theater acoustics have received more thought in terms of corrective practices than in terms of constructive original design. This has resulted in the excessive use of palliatives instead of correct volume and shape for the auditorium itself.

BASIC FACTORS

The two fundamental factors to be considered, before anything is done about surfacing, are: (1) the preliminary outline or basic form of the auditorium, establishing its proportions of length, width, and height; and (2) the volume or cubical content of the auditorium in relation to seating capacity.

PROPORTIONS

"Actual design practice indicates that the most efficient control of sound reflections and the best distribution of sound energy can usually be obtained in theatre auditoriums where the ratios of width to length fall within the limits of 1:1.4 and 1:2. When the length becomes greater than twice the width, difficulties arise from a multiplicity of sound reflections occurring between the side wall surfaces. When the ratio of width to length is less than 1:1.4, the design becomes an unfavorable one from the standpoint of proper sound distribution and of vision. Furthermore, this design usually creates an unusually large rear wall, which is often a source of objectionable sound reflection." Proportions used are based on average measurements in theater shapes of an irregular outline, since a theater is almost never built in strictly rectangular shape.

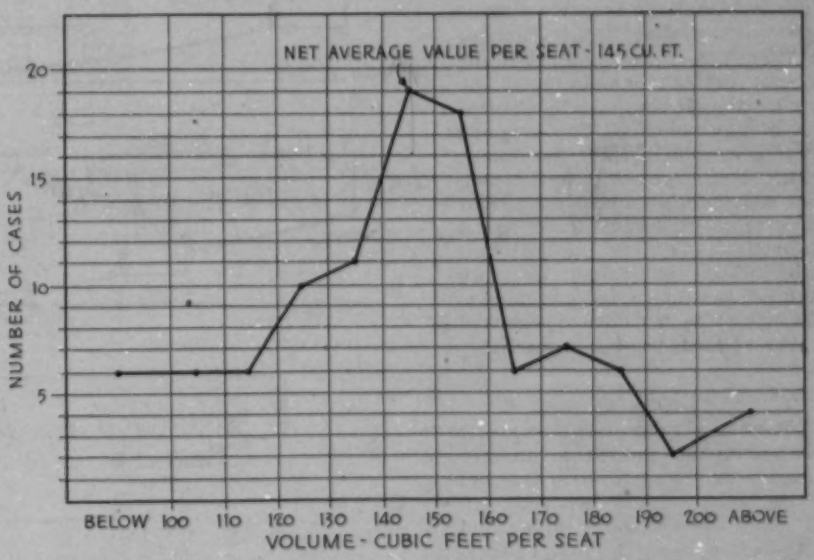
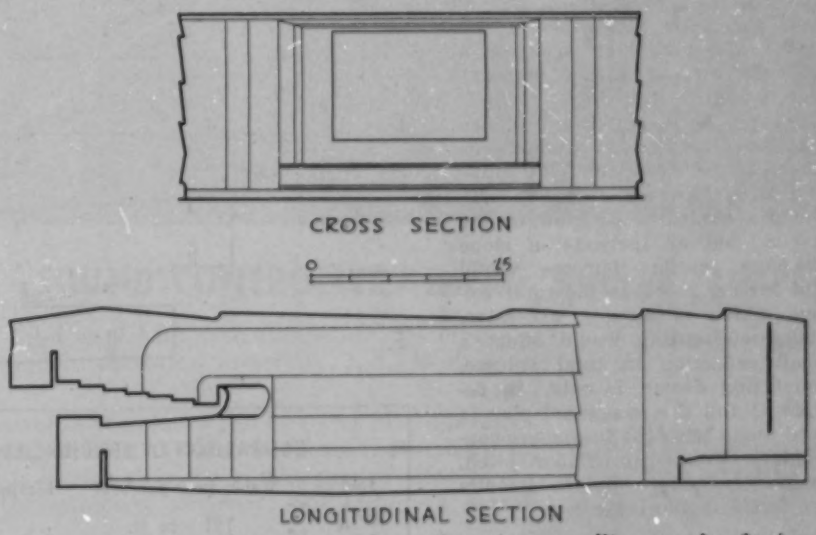


Chart showing the volume (cubic feet per seat) of 100 theaters, each seating between 800 and 1000 persons, built before the war



Sections of a theater showing angular surfaces for controlling sound reflection

CEILING HEIGHT

From an architectural standpoint, ceiling height is governed by three factors: (1) sight-line requirements; (2) width of the light-beam and its projection angle to the screen; (3) general appearance of the auditorium.

From an acoustical standpoint, two other factors should be included in determining ceiling height. These are: (1) correct relationships between height and horizontal proportions; (2) the optimum cubic-foot volume per seat required for a given design. Excessive ceiling heights are generally found in auditoriums. They result in large structural volume per seat and a prolonged reverberation time, producing a need for corrective surfacing materials.

For best acoustical performance, the structural volume of the auditorium should not exceed 150 cu. ft. per seat, and in theaters of 900-seat capacity (a size close to those most often erected), structural volume should lie between 120 and 130 cu. ft. per seat. Given these volumes, the best ceiling height depends on the horizontal factors. There is no one ceiling-height ratio that can be adopted indiscriminately in all designs.

ABSORPTION

Fixed absorption is the kind provided by theater chairs, carpets, and interior surfaces of standard

ACOUSTICAL PLANNING FOR THE MOTION PICTURE THEATER AUDITORIUM

furred construction. Variable absorption is furnished normally by the audience. The chairs contribute the major part of fixed absorption. To insure that the variable absorption will not effect major changes in the reverberation time, it is important that the empty seats approach the acoustical characteristics of the audience. The common type of seat in theater use today, with a leather-covering spring bottom and a fully padded mohair or tapestry covered back, has a sound absorption value, in the standard 20-in. width, equivalent to more than 2/3 that of an average person. The use of such chairs is assumed in the remainder of this study.

DIAGRAMS

Diagrams represent variant treatments of the same theater capacity of 900 seats, with the aim of reducing volume per seat. In all plans the horizontal dimension is the same, using the type of theater having two aisles separating three banks of seats, the middle bank being 14 seats wide and the side banks, against the walls, 7 seats each. A seat width of 20 in. plus 2 aisles at 3 ft. produces a total auditorium width of approximately 54 ft.

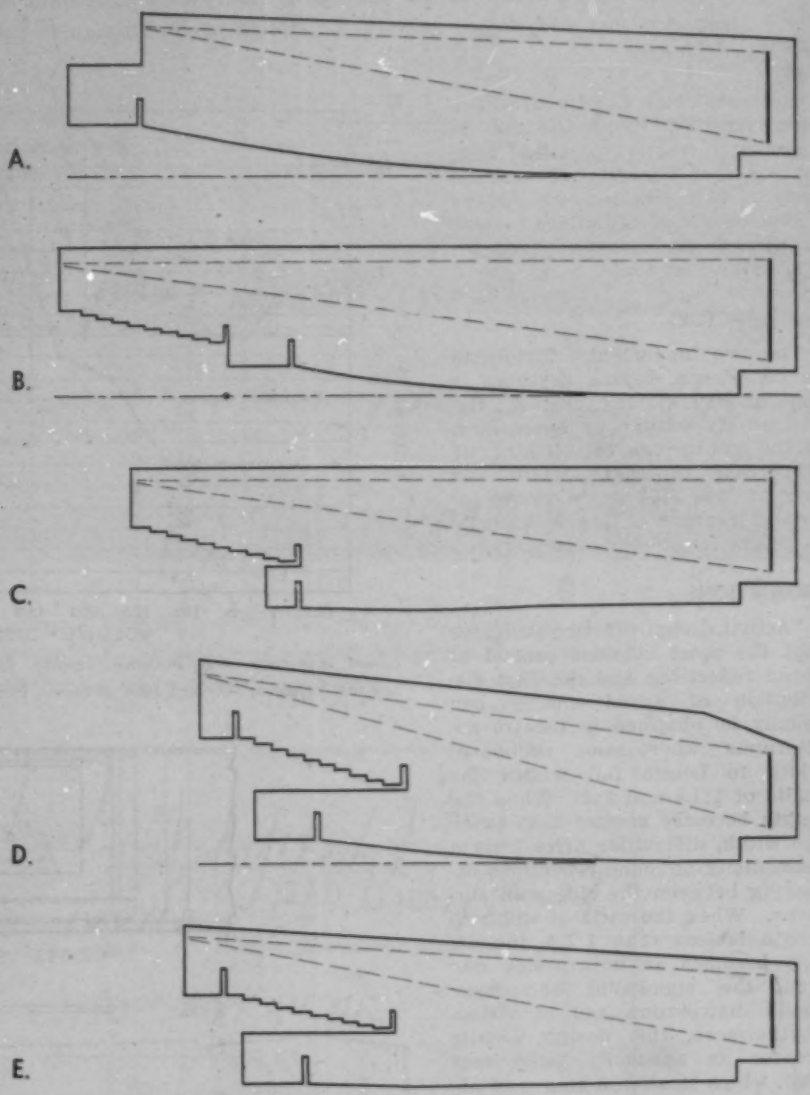
Designs A, B, and D are shown with floor slope approximately as used in past practice. This slope ordinarly does not afford a sufficiently unobstructed view of the screen; but an increase of slope adequate to this purpose would still further increase the total volume which is already excessive. Staggered seating would effect a small reduction in total volume, benefitting design D only. In designs C and E a staggered plan is used along with the less space-consuming reverse-curve floor pitch, further reducing volume. Results are found in the table.

DETAILED ACOUSTICAL FORM

It appears, if other factors are equal, that E furnishes the best basic characteristics for acoustic requirements. This scheme, incidentally, permits cheaper construction and a smaller, more economical screen, requiring less powerful illumination.

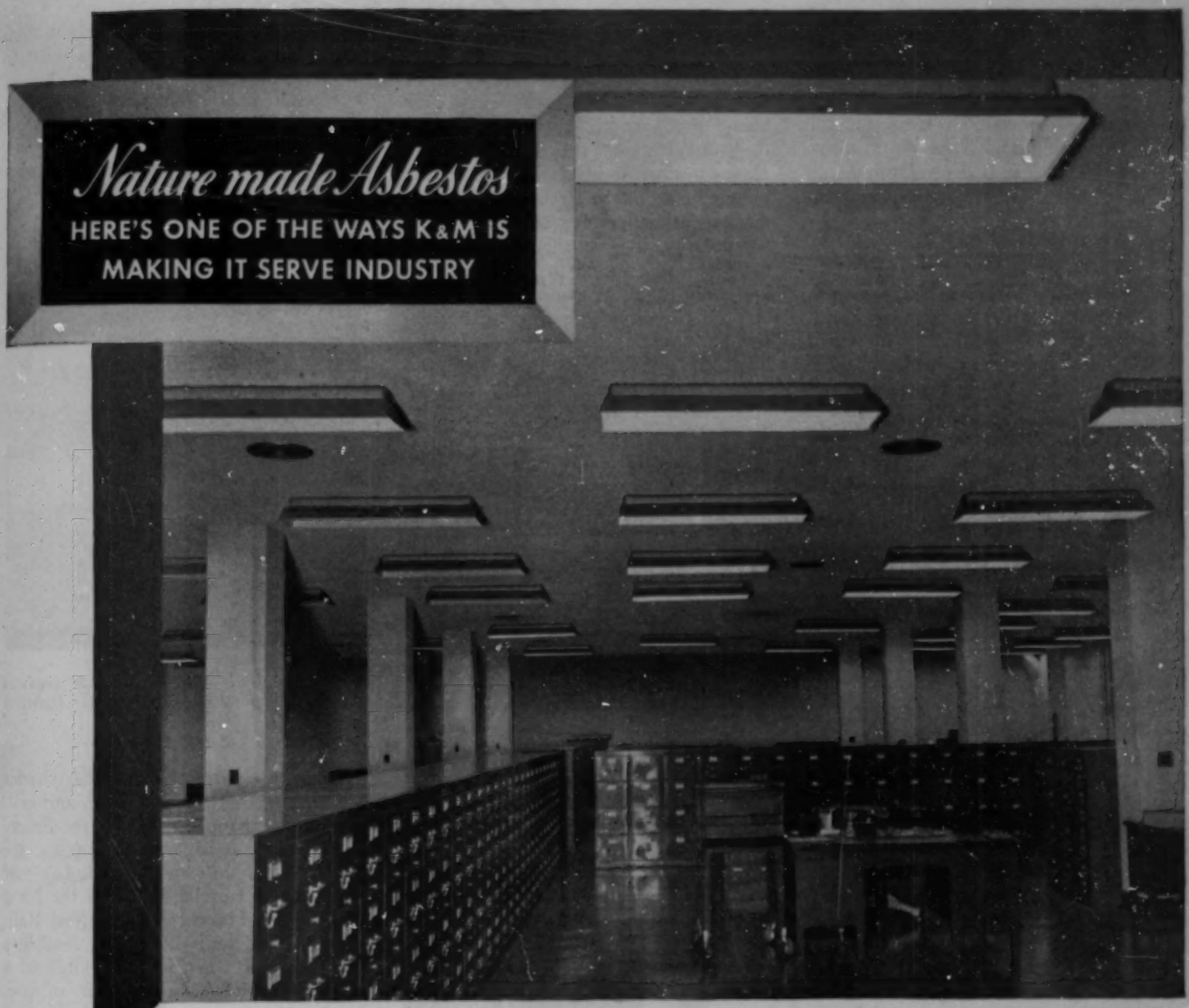
In motion picture theaters there is not the same requirement as in stage shows to reinforce the sound produced on the stage, because sufficient power is supplied electrically. The arrangement of interior surfaces must be such as will break up and disperse sound energy.

Irregularity of surfaces arranged to break up or disperse sound energy may take the form of angular or sloping sections, non-symmetrical broken offsets, or convex projections. The size and position of each such surface unit will depend on the individual design. The surface of a major angular or convex projection may in turn be broken, if this is required in special cases for the dispersion of very high frequencies.



COMPARISON OF EFFICIENCIES OF DESIGNS SHOWN ABOVE.

Section	Cubic Feet per Seat	Maximum Viewing Distance	Screen Width
A	151 cu. ft.	104 ft.	20 ft.
B	148 cu. ft.	119 ft.	22 ft.
C	130 cu. ft.	105 ft.	20 ft.
D	136½ cu.ft.	89 ft.	16 ft. 6 in.
E	120½ cu. ft.	89 ft.	16 ft. 6 in.



This office is "SOUND-CONTROLLED" *with* Sprayed "LIMPET"

Here's an office with an eye . . . and an EAR . . . to the future. Its ceiling is treated with the latest word in modern acoustical materials . . . K&M Sprayed "Limpet" Asbestos.

The whole problem of sound control in the offices and factories of tomorrow is one that is receiving an increasing amount of attention from industrial men, designers and architects. For it is known that the elimination of unnecessary noise not only results in greatly increased efficiency, but improves overall working conditions as well.

The importance of "Limpet's" role in helping bring about these conditions will be apparent in the future. At the moment, wartime demand for "Limpet" is so great in other fields, that it is not always immediately available for industrial or commercial work.

But if you're planning for the future, you owe it to yourself to consider Sprayed "Limpet" Asbestos. Here are some of the advantages that this unique acoustical treatment gives you:

No cutting or fitting—completely covers, completely insulates—no seams, no joints, no holes.

Easily applied—sticks tight to any clean surface regardless of shape of composition.

High noise reduction coefficient of .70 for a ¾" thickness.

Fire-resistant and heat-insulating—thermal conductivity .30 at 75° F.

Surface may be covered with as many as 10 coats of oil emulsion paint without seriously impairing efficiency.

Our Ambler plants proudly fly the Army-Navy "E" flag with its star—an honor awarded K&M employees "for continued outstanding production of war materials."

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA

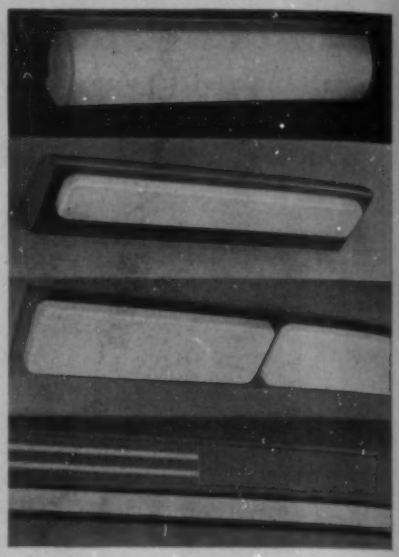
 (Continued from page 44)

used for field tests were reduced by as much as 50 per cent, the manufacturers report, and "fogginess from condensation was virtually eliminated." Libbey-Owens-Ford Glass Co., Toledo, Ohio.

GLASS FIBER INSULATION

Glass fibers with a diameter measured in ten-thousandths of an inch, and weighing only .04 lb. per sq. ft. when bound with a thermosetting resin and formed into ½-in. thick sheets, are being used in the cabins and flight decks of certain types of U. S. war planes to provide insulation against the extreme cold of the stratosphere and to deaden fatigue-causing sound.

The fibrous glass sheets are incombustible and are said to be the lightest inorganic material commercially available for the sound-proofing and insulation of planes. Known as *Fiberglas Type XM-PF*, the sheets gain less than one per cent of their own weight from moisture in the air, when subjected to temperatures of 125° F. and to 90 per cent relative humidity. Owens-Corning Fiberglas Corp., Toledo, Ohio.



Plexiglas shades developed for various types of postwar fluorescent lighting

PLEXIGLAS SHADES

Flexible translucent Plexiglas shades over fluorescent valance lights and ceiling lights, manufactured by the Safety Car Heating & Lighting Company, are incorporated into a new dining car designed by Lurelle Guild for the New York, New Haven and Hartford Railroad. While the light weight, flexibility and strength of Plexiglas (Rohm & Haas, manufacturers) are of particular importance in railroad cars, boats and planes, in the opinion of the manufacturers the material will also find effective use in the postwar home, architectural and decorative fields because of its efficient light transmission and diffusion. Quick and easy removal for cleaning or replacement of the lamps is one advantage claimed for the new shades.

PACKAGED HEATING UNITS

A new prefabricated heating unit called *Penn Packaged Heat* has been announced as ready for postwar marketing. Completely prefabricated and shipped ready for use, the new unit features a patented method of extending the sheet metal side of the boiler or forced warm air unit to form a compartment at the front. This compartment is supported by, and in support of, the entire unit so that no floor foundation is required. At a result, the burner, controls, switches, wiring and circulator or blower are all supported and unified within the system. Penn Boiler Burner Mfg. Corp., Lancaster, Penna.

(Continued on page 112)

EVERY Kind of Building NEEDS
PECORA
WEATHER – PROTECTION

WHEN you specify and use Pecora Calking Compound for sealing joints around window and door frames and for pointing up masonry, you are assured of these important benefits.

FUEL SAVING—A definite saving in fuel by preventing heat losses due to the lack of sealed-tight structural joints.

WEATHER PROTECTION—The prevention of damage frequently caused by the seepage of moisture and the passage of dust through non-sealed joints.

BETTER LIVING AND WORKING CONDITIONS—Pecora-sealed joints eliminate drafts and fluctuating temperatures which invite colds and loss of work hours.

THE COST IS LOW—So much for so little. The additional cost of making a building weather-tight with Pecora is so small, it is soon compensated by the savings effected.

Pecora Calking Compound enjoys the preference and confidence of architects and builders because time has proved its outstanding merit under all climatic conditions. Today, calking is more essential than ever. It adds little to building costs to include Pecora Calking Compound in your specifications and it will save the owner money year after year.

PECORA
CALKING COMPOUND
Composed of high quality elastic oils and gums under a formula originated in 1908. It is impervious to heat, cold, moisture or acid fumes. When set, it forms a tough skin on the surface, but remains permanently pliable and elastic underneath. Long years of service have proved that Pecora Calking Compound will not dry out, crack or chip when properly applied.

Write for Folder and Prices

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"Case Histories of Successful Mass-Feeding Operations is

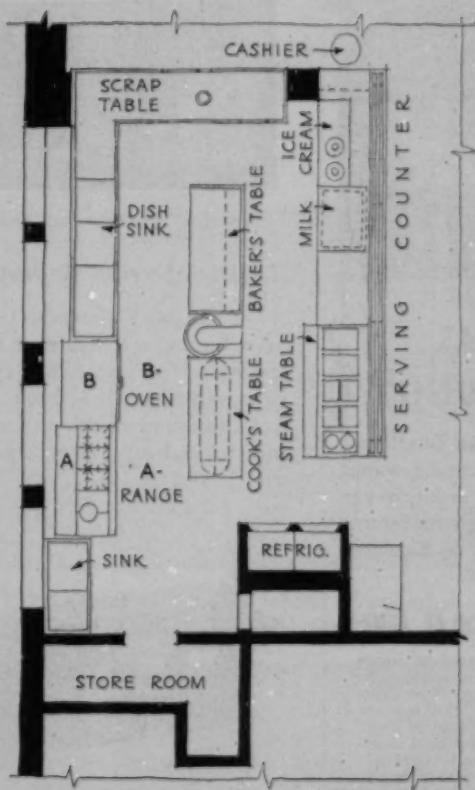
A 'TEXTBOOK' FOR KITCHEN PLANNERS"...

(FROM A LETTER IN THE BLODGETT FILES)

KITCHEN PLAN NO. 13:

Thirteenth of a series of successful mass-feeding kitchen plans.

This kitchen serves 300 school lunches daily in a Cincinnati, Ohio, school, and will handle up to 500.



Basic Menu:

- Soup
- Meat
- Fish
- Meat Substitute
- Three Vegetables
- Dessert

COOKING EQUIPMENT USED:

(a) 1 solid-top range
1 open-top range

(b) 1 No. 932 BLODGETT GAS-FIRED BAKING AND ROASTING OVEN

Designed and installed by: H. Lauber & Co., Cincinnati

THE NO. 932 BLODGETT OVEN in this layout does baking, roasting, vegetable cookery and pudding work. Two separately controlled sections have four 7"-high shelves, and provide ample capacity. For details and specifications of Blodgett Ovens, consult your equipment house or write

The G. S. BLODGETT CO., Inc.

53 Maple Street — Burlington, Vt.

Reprints of this new series will soon be available to architects on request.

A year ago this month, The G. S. Blodgett Co. commenced publication in Architectural Record of a series of actual mass-feeding kitchen layouts, ranging from that of a 150-bed hospital to an automotive plant cafeteria serving thousands of meals daily.

These layouts have had two features in common: each has proved outstandingly successful in operation; each incorporates Blodgett Roasting and Baking Ovens among its "specialized cooking tools."

No items of equipment used in the mass production of food are more important than the roasting and baking ovens used for rapid, economical cooking of meats, fish, vegetables, puddings, etc.

Reprinted as "Case Histories of Successful Mass Feeding Operations," this series has been welcomed by those responsible for designing and planning mass feeeding all over the country, and has drawn a large volume of favorable comment such as that quoted above.

The G. S. Blodgett Co. is deeply gratified at having been able to perform this service, and the series will be continued for another twelve months, commencing with the kitchen layout presented at the left.

Why not write today for your free copy of "Case Histories" and to reserve your copy of the revised edition, soon to be published.

KEEP THIS FOR HANDY REFERENCE

 (Continued from page 110)

ELECTRICAL NEWS

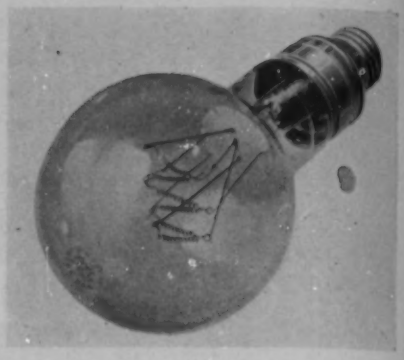
Symbols Chart

A new chart of electrical symbols for power, control and measurement, both in one line and complete wiring diagrams, is included in Bulletin 4403 published by the I-T-E Circuit Breaker Company, 19th and Hamilton Streets, Philadelphia 30. All symbols shown are American Standard.

The chart contains more than 500 symbols and switch sequence tabulations, including over 100 for motors and other rotating machines alone. Made in blueprint style and lacquered, it can be used as a wall chart if desired.

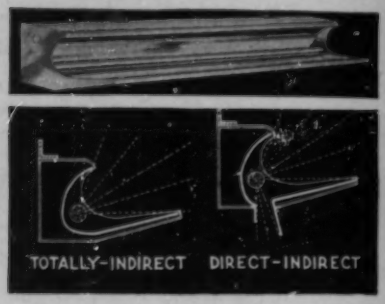
New Tungsten Filament

An improved tungsten filament, result of two years' research and experimenting, has been introduced by the Wabash Appliance Corporation in its Birdseye Infra-Red Heat Lamps.



New filament of coil-coil construction

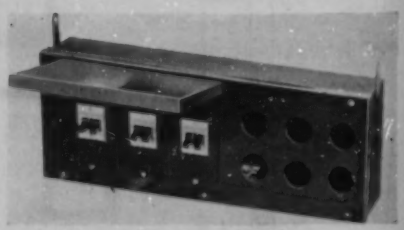
Known as the *LO-Glo MM filament*, this new Birdseye feature is of coil-coil construction. It is said to burn at a lower color temperature, reducing spectral glare to a new low. Wabash Appliance Corp., 345 Carroll St., Brooklyn 31, N. Y.



Reflector unit for germicidal lamp

Air Disinfection Reflector

For use with the new G.E. Germicidal Lamp, a reflector unit providing upper and/or lower and curtain type air irradiation has been developed. Available immediately through hospital and surgical supply concerns. The Edwin F. Guth Co., 2635 Washington Ave., St. Louis 3, Mo.



Scatter box for temporary power control

Scatter Boxes

A recently perfected *Scatter Box* controlling temporary power and light circuit through a central unit protected by circuit breakers, is designed primarily for shipyards and aircraft plants where a number of temporary circuits must be set up and torn down quickly, but is said to be applicable anywhere the same requirements are met.

The new device is built for from

(Continued on page 114)

CENTRAL HEATING IS THE IDEAL SYSTEM FOR THE MODERN COMMUNITY

Mark up another contribution of the war toward better living in the future! Intelligent post-war community planning now fully recognizes the advantages of central heating: making it possible to purchase heat as a commodity like gas, electricity, or city water *at savings of 15% or more:* A powerful impetus has been given to this movement by the experience of central heating in war housing developments. The Elizabeth Park Housing Project in Akron, illustrated above, is a case in point.

RIC-WIL CONDUIT CONNECTS DWELLINGS TO CITY STEAM MAINS 2000 FT. AWAY

Welded into a single piece 700 feet long, this pipe was lowered into the shallow trench beside it, a section of the 2000 foot connection to the city main.

This project, comprising 276 family units is heated by steam supplied by Ohio Edison Company, Akron, Ohio utility. In addition to the 2000 feet of Ric-wiL Insulated Pipe Units connecting the project to the city mains, another 7000 feet are used for steam, return and hot water lines on the project itself. Conduit was furnished complete with prefabricated field accessories and installed in record time—with minimum interference with other construction. The completed piping system is efficient, dependable and maintenance-free, enabling the utility to serve the project with steam at rates considerably under the cost of individual heating plants.

ANY COMMUNITY CAN ENJOY THESE ADVANTAGES:

- Savings of 15% or better in overall fuel consumption.
- Elimination of furnace or boiler tending by consumer.
- Promotes cleanliness in buildings heated.
- Provides extra room in building basements.
- Decreases fire and explosion hazard.
- Reduces smoke and soot, provides cleaner, healthier community
- Eliminates private coal delivery and ash removal.
- Gives uniform, clean heat quickly, whenever needed.

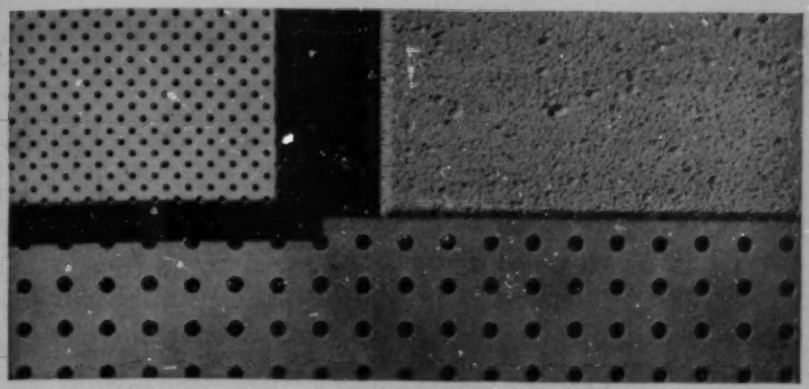
For information about Ric-wiL Conduit for central heat distribution get in touch with your nearest Ric-wiL agent or write to us direct.

RIC-WIL INSULATED PIPE CONDUIT SYSTEMS
THE RIC-WIL COMPANY · CLEVELAND, OHIO
AGENTS IN PRINCIPAL CITIES

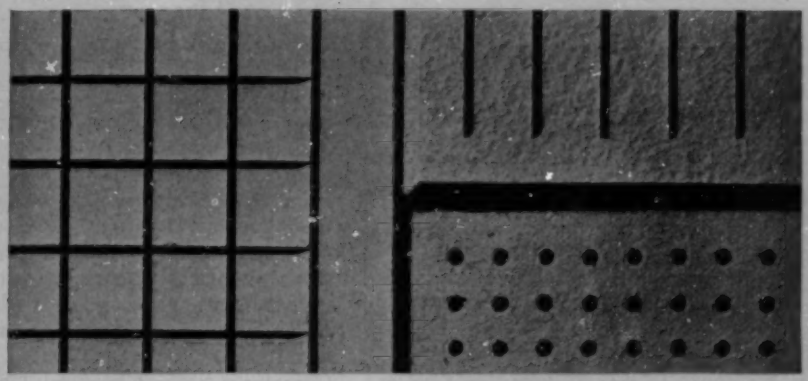
NOISE REDUCTION ACOUSTICAL MATERIALS

TIME-SAVER STANDARDS
MARCH 1944

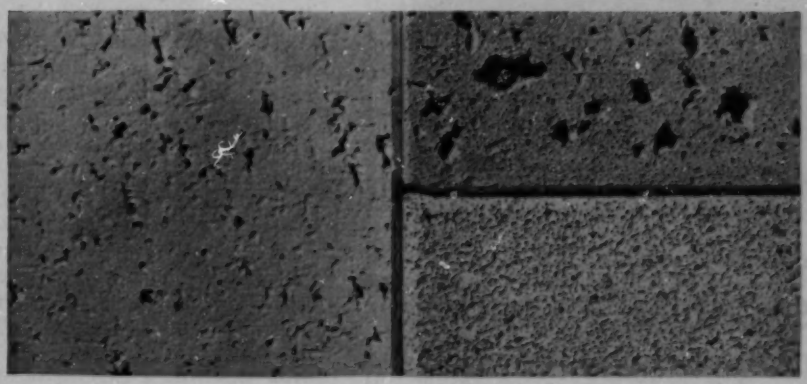
Page 103 of the March issue is here reprinted to include important corrections.



Upper left: Sanacoustic tile, federal specification number IV; upper right: Muffletone, II; bottom: Transite Acoustical Unit, III



Left: Fibretex, federal specification probably V; upper right: Auditone, federal specification V; lower right: Acousti-Celotex V



Left: Acoustone Type F, federal specification number VI; upper right: Muffletone, VI; lower right, Softone, VI

Left: Fiberconstic, federal specification number VIII; upper right: Absorb-A-Noise tile, VII; lower right: Absorb-A-Tone VII

must be considered when it might be subject to impact or abrasion. For instance in games rooms, where table tennis, badminton, handball, etc., are played, its use would be questionable. The effect of paint on a material like this, which depends on diaphragm action, is discussed later.

Costs. The study of comparable costs is frequently complicated by the factor of mounting and backing. A material cheapest for application to an existing ceiling might be expensive if the proper backing had to be provided. On existing plaster, cementing of units is generally the most economical method of installation. The materials possessing the highest coefficients are, in general, higher in cost than the ones with lower coefficients, but under certain conditions, this may be untrue.

Appearance and Design of acoustical products is hard to judge by samples. In place, the material which seems unsatisfactory in a sample may prove perfectly acceptable. Beveled edges, tile patterns, perforation patterns, etc., should be judged for appearance in place. Plastered or sprayed-on material produces an unbroken surface. These have recently achieved less rough surfaces and more even textures than formerly. Pre-tinted materials safeguard their acoustical coefficients and produce more uniform color. Shop etching of "stone-type" tiles for decorative effect has been developed. Stenciling, in place, has also been used decoratively.

Fire Resistance. The fastenings or mounting for the material should be as fire resistant as the acoustical material, or more so. When cemented directly to fire-proof surfaces the less fire resistant materials have less chance to burn. Building Codes should be consulted for local requirements as to fire resistance.

Light Reflection. In industrial plants, offices, stores, etc., the light reflection value of a ceiling is important, both from the standpoint of workers' efficiency and of lighting costs. This factor has not been stated by many producers.

Heat Transmission Coefficients. Acoustical materials can serve a dual purpose, acoustic correction and thermal insulation. The heat transmission coefficient is the heat loss in B.T.U. per hour per square foot, per degree difference in temperature between inside and outside. Data on this factor is limited, as few manufacturers seem as yet

 (Continued from page 112)

four to eight circuits with or without neutral. Circuits are protected by 15 ampere, 115 volt single pole, Type MO Multi-breakers (circuits breakers), although 20 or 25 ampere breakers can be substituted. The hinged cover of the box can be padlocked; openings for plug receptacles are provided. One 1-in. knockout in each end is included and the box has a pair of ears for hanging. Square D Co., 6060 Rivard St., Detroit 11, Mich.

SIMPLIFIED COUPLER

Making final field connections on Ric-wiL Prefabricated Insulated Pipe Conduit has been facilitated by a new drive coupler eliminating the need for skilled workmen and reducing installation time. The coupler is adaptable to mechanical or welded closure.

Ric-wiL insulated conduit is shipped to the job site in 21-ft. sections, completely prefabricated with pipe or pipes, insulation and aligning pipe supports. Ends of helical corrugated conduit are expanded smooth at the factory, removing corrugations for a distance of 3 in. Bare pipe extends beyond ends of conduit for three more inches. After pipe has been coupled or welded, and insulation applied over exposed portions, smoothed ends of conduit are coated with waterproof sealing cement. A heavy-gage split connector sleeve is then slipped over the opening. Clamps are driven onto wedge-shaped channels over lapped joints, quickly making a strong water-tight mechanical coupling. Where a welded closure is required, cement is omitted and ends of sleeve lap-welded to conduit after clamps have been applied. Clamps are then removed and longitudinal seam lap-welded. For extra strength, clamps may again be driven onto channels after weld is made.

Accessories for the complete system —including expansion loops, elbows, tees, anchors, reducers, etc.—are prefabricated and equipped with the same drive coupler for assembly with conduit sections. The conduit is adaptable to underground, surface, or overhead installation. Ric-wiL Co., 1572 Union Commerce Bldg., Cleveland, Ohio.

NEW STANDARD

Recommended Commercial Standard, TS-3728, for Standard Stock Ponderosa Pine Doors, is at present being circulated to the trade for acceptance. The standard provides minimum specifications for quality and construction of houses, garage, cupboard, combination, summer, storm and toilet doors and sidelights made of ponderosa pine. Requirements for material, workmanship, sticking, sizes, tolerances and grading are set forth, together with illustrations and layouts for 120 different designs.

Saving Man Power

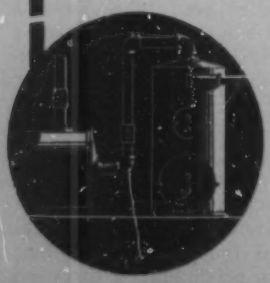
WITH SPENCER VACUUM

Thousands of schools are cleaned with Spencer Vacuum — many of them by women operators. Light weight swivel handle tools with high powered vacuum make cleaning easy, thorough, and fast.

Spencer not only gets under the desks easily — it cleans walls, chalk trays, projection equipment, air filters and even the boiler tubes.

POST-WAR PLANNING is including Spencer's also because most educators and architects say it is the best, the easiest, and the most economical in the long run.

Ask for the Spencer School plans and list of 2500 schools now using Spencer.



246B

SPENCER VACUUM CLEANING

HARTFORD

THE SPENCER TURBINE COMPANY, HARTFORD, CONN.

OPPORTUNITIES AVAILABLE

WANTED: Architectural Draftsman, with at least 5 years experience, for Plant Layout work with large progressive manufacturing concern in upstate New York. Excellent postwar possibilities. If available now, write full personal data. *Box 10*, ARCHITECTURAL RECORD, *119 W. 40th St., New York 18, N. Y.*

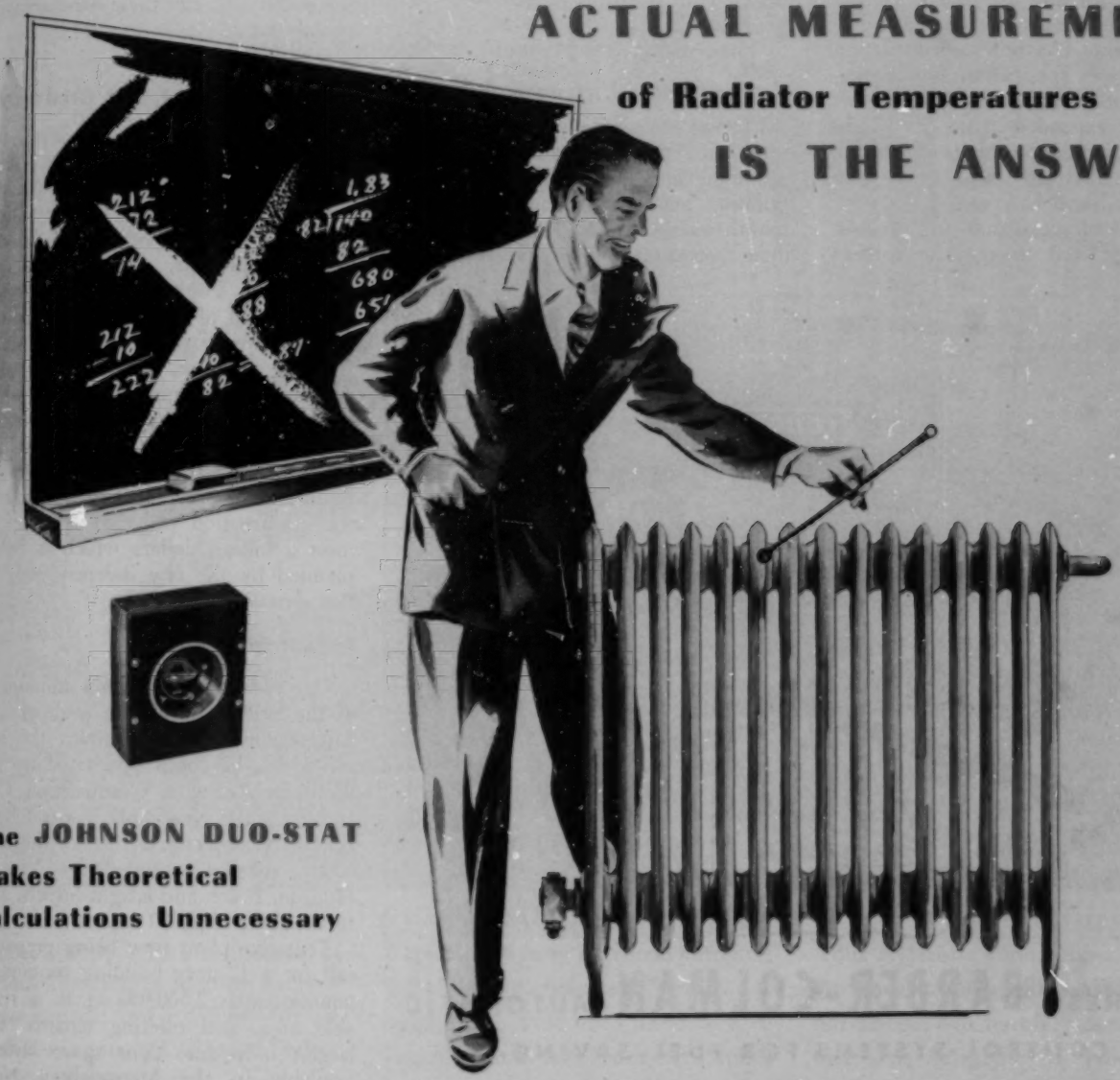
WANTED: Architect, college trained, for design, Production and Plant Layout. This position is with a progressive manufacturing concern in upstate New York. Excellent postwar possibilities. If available now write full personal data. *Box 12*, ARCHITECTURAL RECORD, *119 W. 40th St., New York 18, N. Y.*

For MAXIMUM Fuel Conservation—

ACTUAL MEASUREMENT

of Radiator Temperatures

IS THE ANSWER!



The JOHNSON DUO-STAT Makes Theoretical Calculations Unnecessary

The Johnson Duo-Stat *actually measures* the temperature of the heating system and adjusts that temperature as demanded by outdoor weather conditions. Radiators are full of steam during coldest weather. However, for the greater portion of the heating season, they are only partially filled. This inevitably results in *greatest fuel economy!*

One Duo-Stat may control the temperature of an entire building at the street steam main or automatic firing device. In larger buildings, Johnson Zone Control provides a separate Duo-Stat to operate the valve in each branch main. Installed in existing or new buildings with equal facility . . . Hundreds of Duo-Stats are in successful opertion. Actual records show fuel savings of 25% and more. Ask a Johnson engineer from a nearby branch office, or your heating contractor, to make a survey and recommendations. Explanatory bulletins will be sent, without obligation, upon request.

BUY MORE BONDS!

JOHNSON

Fuel-Saving Starts With CONTROL

Automatic TEMPERATURE AND AIR CONDITIONING Control

JOHNSON SERVICE COMPANY, MILWAUKEE 2, WISCONSIN • DIRECT BRANCHES IN ALL PRINCIPAL CITIES

the manufacture of any metal lath and accessories for any use except for the military and for a few specified industrial purposes. As now amended, the order imposes specified weight limitations on the manufacture of the following items: expanded lath, ribbed lath, wire stucco mesh, cornerite or stripite from expanded lath; and small nose corner bead and base screed.

The sale of metal lath and accessories is restricted to purchase orders bearing preference ratings of AA-5 or better, and to orders amounting to $5 or less. Orders may not be divided to come within this $5 limit.

Copper Items Unfrozen

Freeing of frozen inventories of certain listed copper-containing items of plumbing and heating equipment and building material was announced last month by the WPB. No war use for these products in their present form can be found and their reclamation for remelting purposes is impracticable, WPB officials said. In making the announcement WPB emphasized that the use of copper and copper base alloys in the manufacture of these items remains prohibited.

NEW YORK'S PLANS GROWING

The 850 additional projects recently approved by the State Postwar Public Works Planning Commission for the city of New York boosts the total Commission-approved program for the city to 1,608 projects, estimated to cost $73,000,000. The Commission has allocated a total of $1,000,000 to pay the state's share of the cost of the plans.

This program, the Commission pointed out in announcing approval of the additional projects, is made up of relatively small construction jobs which could be undertaken quickly, with a minimum of delay. It is in addition to the construction program totaling almost a billion dollars which is being planned by the city independently of the state-aided program.

Industrial Center

One of the most recently announced of the city's independent projects is a $10,000,000 industrial center, the site for which has been purchased by the Tishman Realty & Construction Co., Inc. from the New York Central Railroad. The property consists of the four square blocks bounded by Varick, Hudson, Beach and Laight Streets, and totals about 180,000 sq. ft.

Tentative plans now being prepared call for a 12-story building containing approximately 2,500,000 sq. ft. of rentable area, and offering tenants "the largest individual floor space layouts available in the Metropolitan New York area—close to 180,000 sq. ft. of unobstructed area with a stretch of more than 400 ft. in any direction, especially designed for assembly-line production." The flat roof will be used as a helicopter field according to present plans, and freight will be transported direct to the roof and moved by elevator to all sections of the building. Special loading platforms, connecting with elevators, heavy enough to carry trucks from the street floor to any floor in the building for loading or unloading, are also proposed.

Fashion Center Building

Ely Jacques Kahn has been selected as architect for the proposed fashion building in the heart of the fashion center scheduled for postwar erection (see ARCHITECTURAL RECORD, Feb., 1944, p. 44). Named to work with Mr.

(Continued on page 118)

Fuel-Saving Starts With CONTROL

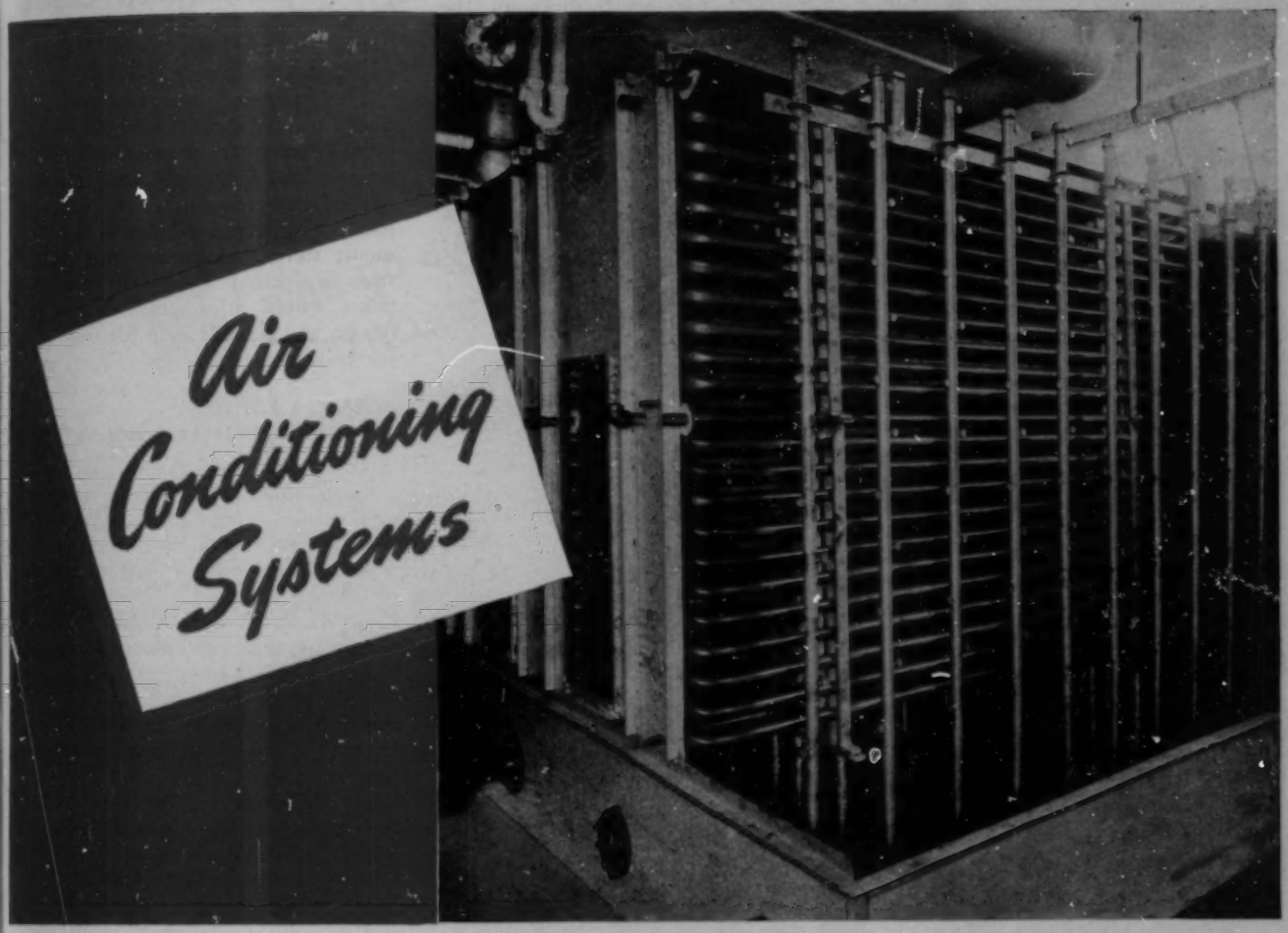
USE THESE **BARBER-COLMAN** AUTOMATIC

CONTROL SYSTEMS FOR FUEL-SAVING

THE bulletins illustrated above explain in detail the purpose and method of operation of three Barber - Colman Temperature Control Systems which have proved their ability to save substantial amounts of vital fuel by preventing waste of heat through automatic maintenance of uniform temperature. COMPENSATED CONTROL is an improved heat-anticipation system based on actual temperature rise in the duct or at the radiator, which is extremely effective in preventing wide fluctuation in room temperature. The ECONOSTAT is a cycler system with the length of on-off periods controlled from a remote outdoor thermostatic bulb, thus accurately and automatically adjusting heat supply to meet changes in outdoor temperature. HOT WATER HEATING CONTROL is an indoor-outdoor dual-thermostat system which automatically changes the temperature of the circulated hot water to match outdoor temperature changes. These are only a few of the many combinations of high-quality, accurate, durable Barber-Colman Temperature Control equipment which can be engineered to provide efficient fuel-saving control in all types and sizes of buildings. Write for copies of these circulars today and join the vital fuel-saving program.

BARBER-COLMAN COMPANY
1232 ROCK STREET • ROCKFORD, ILLINOIS

REPUBLIC—THE PREFERRED PIPE FOR



Republic Pipe offers a number of distinct advantages to pipe users—hence is preferred by many for air conditioning installations and other types of piping work.

Because it is made by Republic's improved continuous weld process, this pipe is highly uniform. And because it is produced from ore mine to finished product under the close control of ONE integrated organization, it is dependable—length after length, shipment after shipment.

Republic Pipe is uniformly strong. It bends and coils easily—does not open at the weld even under severe bending. It is free from hard spots in the metal. It cuts and threads readily and cleanly. And it welds quickly and soundly whenever threaded fittings are not used.

An important advantage in air conditioning work is its clean surface—inside and outside—free from scale which might clog and damage valves and instruments.

Your Republic Pipe Jobber carries stocks of popular sizes—black and galvanized—in handy, economical, uniform lengths. If you need them, he can provide extra long lengths. Ask him to give you full information in sizes available, delivery schedules and priority necessary.

REPUBLIC STEEL CORPORATION
GENERAL OFFICES • CLEVELAND 1, OHIO
Berger Manufacturing Division • Culvert Division
Niles Steel Products Division • Steel and Tubes Division
Union Drawn Steel Division • Truscon Steel Company
Export Department: Chrysler Bldg., New York 17, N. Y.

Republic STEEL PIPE

Pipe is only one of a wide line of Republic Steel Building Products. See Sweet's for details

 (Continued from page 116)

Kahn on the project are Robert Allan Jacobs and Sydney Goldstone, associate architects; Jares, Baum and Bolles, mechanical engineers; and Charles Mayer, structural engineer.

The site selected for the new building is the block between Broadway and Seventh Avenue, from 38th to 39th Street, a total of 45,000 sq. ft. Present plans call for a building 37 stories high, with interior loading platforms for large trucks, an arcade running through from 38th to 39th Street, and automobile parking facilities in the basement.

Bus Terminal

The State Postwar Works Planning Commission has approved an application from the Port of New York Authority for $180,000 to prepare contract plans and specifications for a Union Midtown Bus Terminal near the Manhattan end of the Lincoln Tunnel. At the same time it approved an application from the New York City Tunnel Authority for $35,000 to make studies and prepare preliminary plans for bus and passenger car parking facilities in the vicinity of the Manhattan Plazas of the Queens Midtown and Brooklyn-Battery Tunnels.

The proposed bus terminal, estimated to cost about $9,000,000, would provide complete accommodations for loading and unloading long distance and suburban passengers and baggage; parking facilities for buses in the basement; stores, restaurants and concessions incidental to travel; space for ticket sellers, information booths and offices; and possibly even parking space for private cars.

JOINT A.I.A.-P.C. TECHNICAL COMMITTEE

To establish active collaboration on technical questions between architects and manufacturers of building products, a joint technical committee has been formed by the American Institute of Architects and The Producers' Council. Each organization is represented by three members as follows: For the A.I.A., Abraham Levy, Philadelphia, chairman of the A.I.A. committee on technical services; H. J. Dowsell, New York, member of the firm of Shreve, Lamb and Harmon; James Edmonds, Jr., Baltimore, A.I.A. treasurer. For the Council, Tyler S. Rogers, Toledo, chairman of the Council's technical committee; F. J. Plimpton, New York, past chairman of the Council's technical cooperation committee; and Harry A. Plummer, Washington, a member of the technical committee. Mr. Levy and Mr. Rogers are co-chairmen of the new group, and Theodore Irving Cox, A.I.A. technical secretary, will serve as secretary.

At the new committee's first meeting on May 25, a comprehensive agenda was adopted, providing for a joint effort with respect to encouraging the adoption of dimensional coordination, revision of local building codes, and stimulating use of the New Bidding Practice for Building Materials which replaced the "or-equal" clause.

WURSTER NEW M.I.T. DEAN

William W. Wurster, the distinguished California architect who has designed many notable buildings and large-scale housing projects, has been appointed Dean of the School of Architecture of the Massachusetts Institute of Technology. Mr. Wurster succeeds Dean Walter R. MacCornack, who will retire on July 1st.

Mr. Wurster's professional work stresses the importance of regionalism

(Continued on page 120)

A PROUD RECORD OF PERFORMANCE

High-Altitude HEATING IN PITTSBURGH'S GRANT BUILDING

10,000,000 POUNDS OF STEAM SAVED PER YEAR

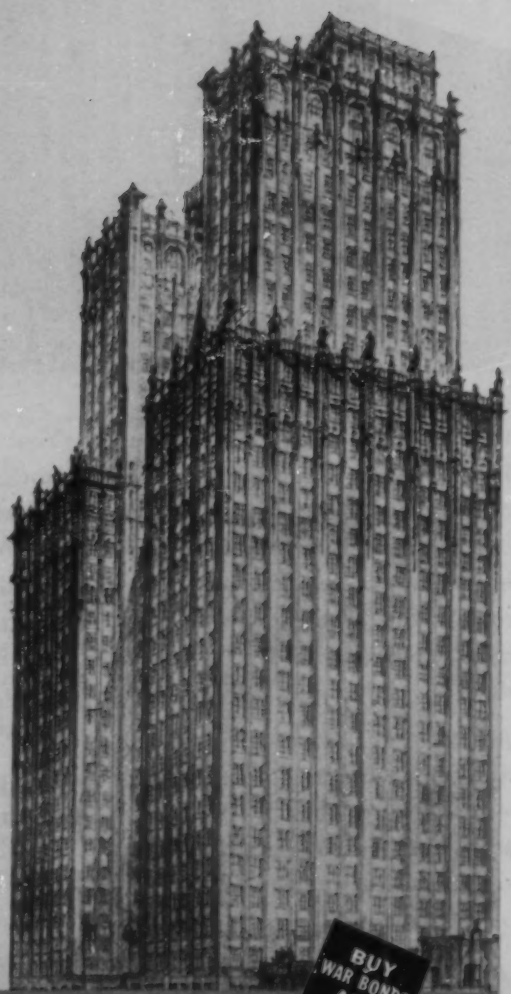
When the heating system to be utilized in the Grant Building was to be determined, the public utilities company, from which the building was to buy steam, estimated the annual steam consumption would be 30,000,000 pounds. Dunham engineers, basing their estimate on the use of Dunham Differential Heating, set their figure at 20,000,000 pounds annually. Dunham was specified. The performance data submitted by the Grant Building engineer, covering 14 years of Dunham heating, show that High Altitude Heating more than fulfilled the Dunham estimate.

CONDENSATION OF PERFORMANCE DATA —At estimate of 30,000,000 pounds annually the consumption of steam would have been 420,000,000 lbs.

Actual steam consumption with the Dunham Differential System from 1929 thru 1943 275,800,000 lbs.

Showing by Differential operation a saving of 144,200,000 lbs. At 71.8c per M lbs. this savings would have a value of $103,535.60.

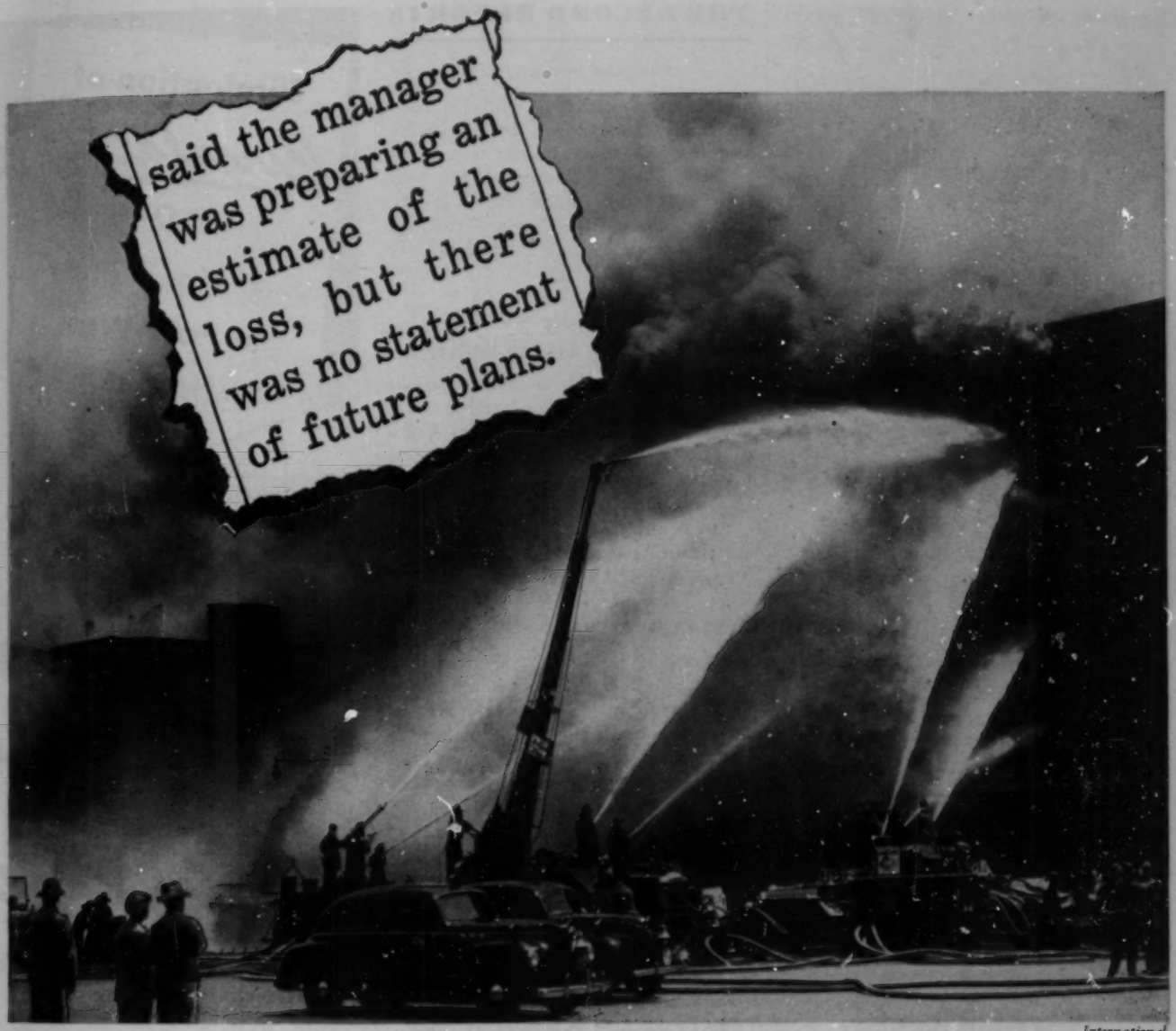
May we send you a copy of our Brochure 632: "High-Altitude Heating for Buildings"? Just write C. A. Dunham Co., 450 E. Ohio Street, Chicago 11, Illinois.



BUY WAR BONDS AND KEEP THEM

DUNHAM makes fuels go further

C. A. DUNHAM COMPANY
450 E. OHIO ST., CHICAGO 11, ILLINOIS
Toronto, Canada London, England



International

A GOING CONCERN . . . GONE to the limbo of lost enterprises, in a few dismaying hours. Too often that is the penalty for failure to prepare for one of the most common hazards of business . . . fire. With the building in ruins, its contents destroyed and customers transferring their orders to competitors, any plans for the future may well seem futile. Experience shows that 2 out of every 5 burned-out businesses *never resume operations.*

FIRE HAZARDS HAVE MULTIPLIED. Increased number of workers, many untrained in fire prevention; three-shift production with less time for "housekeeping"; new materials, many inflammable; overworked motors . . . all such conditions increase the threat of a disastrous fire at a time when losses are almost irreplaceable. What precautions have you taken to protect what you have built up?

FIRE CAN BE CONTROLLED. There is one way—a *proved* way—of checking this needless destruction *at the source, when it starts* . . . a Grinnell Automatic Sprinkler System. During the past ten years, over 8000 fires in Grinnell-protected buildings have put themselves out before major damage could occur.

• • •

See that your buildings have this 24-hour-a-day safeguard before fire strikes. Experienced Grinnell engineers will help you plan dependable protection. Get in touch with them . . . write, or call your nearby Grinnell office.

Grinnell Company, Inc.,
Executive Offices, Providence 1, R. I.
Branch Offices in principal cities.

QUESTIONS AND ANSWERS
about Automatic Sprinkler Fire Protection

Q. My business is highly specialized. Can you meet its conditions?

A. There are specialized types of Grinnell Systems to meet *all* conditions. Even the risk of a neighboring firetrap that doesn't belong to you.

Q. Suppose fire starts in a place where there's no Grinnell Sprinkler Head?

A. If Grinnell engineered the job, it couldn't. A Grinnell engineered layout covers every nook and corner.

GRINNELL

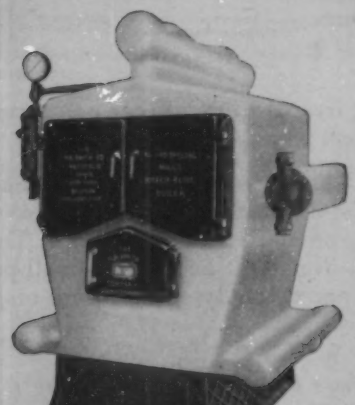
AUTOMATIC SPRINKLERS

For Production Protection

Boiler Plant
FOR TOMORROW'S
MUNICIPAL
BUILDING

Boilers for steam and hot water heating systems in post-war fire stations, town halls and other municipal buildings will probably be the same models that were used in the best pre-war installations. Architects and engineers should, therefore, look to the record of such installations for concrete information on which to base their specifications for post-war projects.

Typical of the best in pre-war fire stations is the building of the New Canaan (Connecticut) Fire Department. Here an H. B. SMITH 240-S-9 "Mills" boiler supplies 1607 sq. ft. of steam radiation plus domestic hot water for the entire year with an average annual fuel consumption of under 6000 gallons.



No. 240 Mills Boiler for Oil Burning

H.B. Smith
CAST-IRON BOILERS
The H. B. SMITH CO., Inc.
WESTFIELD • MASSACHUSETTS
Boston New York Philadelphia

THE RECORD REPORTS

(Continued from page 118)

and indigenous design and his solutions are characterized by originality and freedom from stylistic restrictions either modern or traditional. His new post places him at the head of the country's oldest architectural school, which now includes a division of city planning and housing.

ADVISER NAMED FOR WAR MEMORIALS

Howard Dwight Smith has been appointed to the post of architectural adviser to the Commission on Community War Memorials for Physical Fitness, Chairman George M. Trautman has announced.

Mr. Smith, a member of the American Institute of Architects, is architect for Ohio State University.

CINCINNATI PLANNER

Sherwood L. Reeder, Detroit area director for the FPHA, has confirmed his resignation, effective June 17, to accept the position of director of the Cincinnati City Planning Commission.

As head in the Detroit metropolitan area of the construction branch of the FPHA, Mr. Reeder supervised the erection of 23,000 units of war housing costing approximately $85,000,000.

NEW OFFICES

George B. Cabot

George B. Cabot, M.L.A. (A.U.S.-C. of E. Retired) announces that he is now engaged in the general practice of landscape architecture, with offices at 50 Beacon St., Boston.

Robert L. Davison Associates

This is a new organization, headed by Robert L. Davison, and formed to carry on consultation, research and development work on new materials, construction methods, equipment and family requirements in the field of housing. Offices are at 299 Madison Ave., New York 17.

Mr. Davison was for 13 years Director of Research of the John B. Pierce Foundation.

Francis Chiaverini

Registered architect and engineer, and Rhode Island Chief of Division of Public Buildings, Mr. Chiaverini has been appointed Supervising Architect for Public Buildings Post War Planning, with headquarters at the R. I. Armory Mounted Commands, 1051 N. Main St., Providence.

(Continued on page 122)

PLAN TO USE
Blo-Fan
"SPOT" VENTILATION

Constantly moving air current make it necessary to pick up unwanted odors *immediately*, before the furnace or air-conditioner can draw them through the house. By placing "Blo-Fan" (combination fan and blower) ceiling ventilators directly above the source, this problem is easily solved.

Specify Today!
For Details see our Catalog in 1944 SWEET'S

BUY U.S. WAR BONDS *Now!*

PRYNE & CO., INC.
1245 E. 33rd ST. LOS ANGELES
Branches (to be reestablished after war)
SAN FRANCISCO · SEATTLE · CHICAGO · NEW YORK

Owner, Walter J. Kohler, Jr., Kohler, Wisconsin Architect: W. F. Deknatel Roofer: F. J. A. Christiansen Roofing Co., Milwaukee

"Was the roof of tomorrow here yesterday?"

A well-known American architectural editor, in a recent speech, said that the home of tomorrow will be a much different place from the home of yesterday, but that it will be made up of individual features which have been present in one or another house in the past.

The great improvement in the house of tomorrow, he said, is that *all* the best features of the houses of the past will be available in a single house in the future.

Maybe the same thing can be said of the industrial and commercial buildings of the future. They will be much different from the buildings of the past . . . the war has brought many changes in building materials and building methods . . . but they will still have the things which have proved best in the past.

Nothing that has developed in the frenzied construction rush of the war period has brought any roofing material which has proved better than the good old, tried-and-true coal tar pitch. The best advice still is to specify Koppers Built-Up Roofing constructed with Old Style Pitch and Approved Tarred Felt.—Koppers Company, Tar & Chemical Division, Pittsburgh 19, Pa.

KOPPERS

The industry that serves all industry

KOPPERS *coal tar pitch roofing*

KOPPERS *coal tar pitch waterproofing*

"Zoned Heating Solved Our Problem"

"Before we installed our new Steam Heating System, discomforts and distractions due to incorrect heating were seriously affecting the efficiency and health of our workers. Our drafting rooms, requiring north light, were too cold . . . Our offices and conference room, on the south side of the building, were too hot . . .

"We chose a Zoned Webster Moderator System of Steam Heating to solve our problem. Now we have correct heat in every department. And we use less fuel!"

The Webster Moderator System supplies continuous distribution of steam. Through accurate orificing, all radiators receive steam at the same time but in varied quantities, as needed. An Outdoor Thermostat automatically changes the heating rate to agree with changes in outdoor temperatures.

More Heat with Less Fuel

Seven out of ten buildings in America (many less than ten years old) can get up to 33 per cent more heat from the fuel consumed. This is the result found from thousands of building surveys made by Webster Engineers.

Write for "Performance Facts" if you are dissatisfied with your present steam heating system. This free booklet contains case studies of 268 modern steam heating installations in commercial, industrial and institutional buildings . . . and the savings they are effecting. Address Dept. AR-7.

WARREN WEBSTER & CO., Camden, N. J.
Pioneers of the Vacuum System of Steam Heating
Representatives in principal Cities : : Est. 1888

Outdoor thermostat automatically changes heating rate when outdoor temperature changes.

Fuel-Saving Starts With CONTROL

Webster Steam Heating

THE RECORD REPORTS

(Continued from page 120)

James Stewart Organization

The James Stewart organization, consisting of the James Stewart Corporation and James Stewart & Co., Inc., is moving its national headquarters in Chicago from the Fisher Building to the Continental Illinois National Bank Building. The organization, one of the oldest engineering and construction groups in the country, is celebrating its 100th anniversary this year.

Frank Wyatt Woods

Mr. Woods has reopened his architectural offices at 605 Lincoln Rd., Miami Beach, Fla.

REA EXPLAINS PLANS

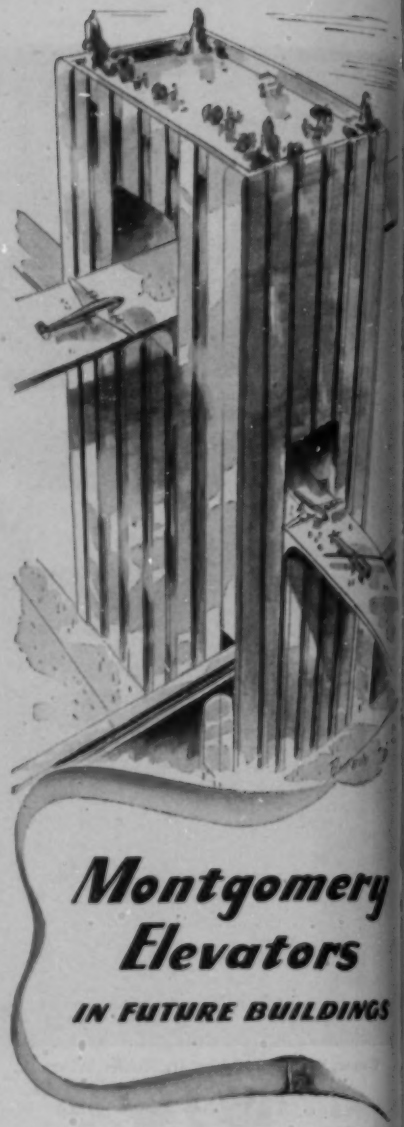
The Rural Electrification Administration takes exception to our note of enthusiasm for their postwar plans (May, p. 104). Allyn A. Walters, Chief, Information Division of the REA writes us:

"REA has no ambitious plans for financing the generation of power, nor for its transmission. All of our ambitions are centered on distributing power to people in rural areas who need it. We have financed generating plants and transmission lines only where low cost power was otherwise unobtainable. Our borrowers purchase, in large part from private power companies, about 10 kilowatt-hours for every kilowatt-hour they generate. Our plan is to finance as few generating plants as possible. However, such financing has been necessary many times in the past in order to get power to farmers at a price they can afford, and it may be necessary in the future to accomplish the same result.

"That seven million figure includes farms and rural non-farm dwellings. The most recent census figures show that there are only about six million farms in the entire country, and slightly over 41 per cent of these farms are presently receiving electric service."

A CORRECTION

The table and map explaining the approximate geographical distribution of new non-farm dwelling units in the "Residential Building Potentials" article in our June issue (p. 69) were unhappily not keyed alike. In the table, Upstate New York should have been listed as No. 3, Metropolitan New York and Northern New Jersey as No. 2, Minneapolis District as No. 13, St. Louis as No. 11, Kansas City as No. 14, and New Orleans as No. 12.



Montgomery Elevators

IN FUTURE BUILDINGS

NEW BUILDINGS now being planned will utilize new materials and techniques. And where passenger and freight elevators are required, new problems will arise. For assistance in solving these problems you can depend on Montgomery. For nearly 50 years Montgomery Elevators have been giving dependable service in thousands of buildings throughout the country. Accurate records show that practically no major repairs have ever been required. Too, original cost of Montgomery Elevators is generally lower than that of other comparable makes. If you are planning a specific project, we invite your elevator problems.

MONTGOMERY MANUFACTURES a complete line of passenger and freight elevators, electric dumbwaiters and special equipment for vertical transportation.

montgomery Elevator company

HOME OFFICE · Moline, Illinois
Branch Offices and Agents in Principal Cities

WHEN Sam comes home, sturdy, grinning—and toting a souvenir of grim, relentless days . . . you'll agree: *No flies on Sam!*

That's more than just an old slang phrase that came to life again. No flies on Sam or his brothers-in-arms . . . in Fortress Europe . . . the South Pacific . . . Alaska.

Because men in the armed forces were protected against disease-carrying insects by miles upon miles of LUMITE, the new plastic screen that defies the elements! Woven from Saran, it resists the effects of heat, cold, acid fumes, salt air; is impervious to rust or corrosion . . . yet gives more light and lasts longer.

Sam—and millions like him—will come home, *sold*, through actual living proof, on LUMITE plastic screening. He'll expect—and *demand*—LUMITE efficiency and durability in his home . . . office . . . factory.

Here is *the* postwar product that is being sold to millions of potential future buyers *right now* . . . every hour of the day . . . across the globe. Here is a postwar market well worth investigating—and preparing for—today!

TESTED IN WAR READY FOR PEACE

- ★ Long-lasting . . . will not rust or corrode
- ★ Non-staining . . . no streaking of sills or sidewalls
- ★ Translucent . . . admits more daylight
- ★ Strong, resilient . . . no dents or bulges
- ★ Unaffected by fumes or salt air
- ★ Non-inflammable
- ★ Competitively priced

Memo to Architects and Engineers: Include LUMITE New Plastic Window Screens in your postwar plans for home, factories, offices, schools! Write *now* for detailed information.

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